The Development and Validation of the Workplace Racial Microaggression Scale for Asians and Asian Americans (WRMS-AAA)

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ABSTRACT

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In this dissertation, I developed and validated the workplace racial microaggressions scale for Asians and Asian Americans, WRMS-AAA. This new scale measured the frequency of general and stereotype-based microaggressions that Asians experience in the workplace. General microaggressions are subtle forms of discrimination that could pertain to other minority groups, whereas stereotype-based microaggressions are subtle forms of discrimination that are based on stereotypes of Asians. In Phase 1, items were generated based on extant literature. These items were refined based on the feedback provided by subject matter experts who rated these items on relevancy, clarity, and provided other open-ended feedback. In phases 2 through 5, 351 participants completed a battery of measures including the WRMS-AAA and other measures to assess convergent, discriminant, and concurrent validity. These participants were then randomly split into two sample groups. In phase 2, an exploratory factor analysis using data from sample one (n = 180) revealed a four-factor structure for the WRMS-AAA. Two of these factors were general microaggressions, *mistaken identity* and *not recognized*, and the other two factors were stereotype-based microaggressions, *ascription of math competency* and *submissiveness and lacking communication skills*. In phase 3, using data from sample 2 (n = 171) a confirmatory factor analysis provided further support for the four-factor structure. Both samples provided good internal consistency. In phase 4, the two samples were combined to examine the convergent and discriminant validity of the WRMS-AAA. The WRMS-AAA was highly related to the Workplace Incivility Scale (Cortina et al., 2013) and the Racial and Ethnic Microaggressions

Scale (Nadal, 2011), providing support for convergent validity. There was little to no correlation between the WRMS-AAA and social desirability, and there was a weak positive correlation between the WRMS-AAA and neuroticism, providing support for discriminant validity. In phase 5, the WRMS-AAA was correlated with organizational outcomes. The WRMS-AAA was negatively correlated with organizational support, commitment, and job satisfaction. Additionally, the WRMS-AAA was positively correlated with intention to quit and burnout. These correlations provided evidence of concurrent validity, further establishing the validity of the WRMS-AAA. Subtle forms of discrimination are different from explicit discrimination, in that they can be elusive. The WRMS-AAA is one of the only known scales to measure the general and specific subtle forms of discrimination in the workplace. Results and implications of this research are discussed.

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DEDICATION

To my mother, father, and stepfather, we did it!

CHAPTER 1

Introduction

Asian and Asian Americans[1] are an integral part of the US workforce, yet few researchers have studied the subtle forms of racism that they experience in the workplace. Federal laws and world events have led to newer waves of Asian immigrants have led to the rising of the Asian population in the US. In 1965, Asians made up less than one million people in the US population (Pew Research, 2017). Currently, Asians make up over 20 million people in the US, constituting about 6% of the US workforce (US Department of Labor, 2016). Historically, not only have Asians contended with explicit racism (e.g., Chinese Exclusion Act of 1882, Japanese internment camps through Executive Order 9006 in 1942, Chae Chan Ping v. United States in 1889 upholding the constitutionality of Chinese exclusion laws), but they also have had to contend with subtle forms of racism (Sue, Bucceri, Lin, Nadal, & Torino, 2007). While expressions of explicit racism have been on the decline, subtle forms of discrimination have been on the rise (Dovidio, Evans, & Tyler, 1986). In light of these historical events, Asians are still likely to experience subtle forms of discrimination in the workplace. In this dissertation, I will examine the subtle forms discrimination that Asians experience in the workplace. In doing so, this dissertation will rely on previous research on workplace incivility (Andersson & Pearson, 1999) and racial microaggressions (Sue, Bucceri et al., 2007; Sue, Capodilupo et al., 2007).

It is widely known that explicit discrimination can be detrimental to organizations (Colby & Ortman, 2015). Organizations tend to discourage explicit discrimination in the workplace for three main reasons: 1) explicit discrimination is illegal; 2) it creates a negative reputation for

[1] The term Asians and Asian Americans will refer to both Asians born in the US and Asians born outside the US who are eligible to work in the United States.

organizations which then may affect the recruitment and retention of diverse employees; and 3) it can also be costly to organizations if they lose discrimination cases brought against them (Burns, 2012). Research on outcomes of litigation of explicit vs. subtle discrimination cases have indicated that the courts mostly favored the plaintiff in explicit discrimination cases as opposed to subtle discrimination cases (King et al., 2011). Thus, it makes sense that organizations focus their efforts on addressing explicit rather than subtle forms of discrimination. However, subtle forms of discrimination can also be costly to organizations. While subtle forms of discrimination lawsuits against organizations do not typically favor the plaintiffs (King et al., 2011), subtle forms of discrimination may still affect organizations indirectly by lowering the retention rates and the performance of employees. Annually, over two million employees leave their jobs because of subtle forms of discrimination (Level Playing Field Institute, 2006). Some examples of these subtle forms of discrimination include, but are not limited to, accumulation of inappropriate comments, jokes, and e-mails. The annual cost of turnover through recruitment, selection, and training of two million employees is over $64 billion (Burns, 2012; Level Playing Field Institute, 2007). For employees that stay with organizations that condone subtle forms of discrimination, research has shown that implicit discrimination can hinder the physiological and mental health of the targets of discrimination (Gee et al., 2007; Steffen & Bowden, 2006). While there is currently no direct monetary estimate of how much subtle forms of discrimination would cost, research has demonstrated that mentally and physiologically strained employees do not perform optimally (Beehr et al., 2000). This strain is a hidden cost of subtle forms of discrimination in the workplace. While explicit and subtle forms of discrimination are similar in that they can be costly to the organization, both directly and indirectly, they are different in that employees in organizations are typically able to recognize what explicit racism looks and sounds

like. Additionally, subtle forms of discrimination are harder to recognize because while targets are aware of the subtle forms of discrimination, perpetrators and bystanders may not be (Kim et al., 2019).

One construct that describes the subtle forms of discrimination that take place in the workplace is incivility. Workplace incivility is defined as low-intensity hostile behavior with ambiguous intent to harm (Andersson & Pearson, 1999). These behaviors could be directed toward anyone in the workplace and can range from being ignored by a fellow co-worker to being talked down to in an inappropriate way (Cortina et al., 2001). These behaviors can manifest through multiple lines of communication, such as in person, messaging applications, or even e-mail. These behaviors may be viewed as innocuous, yet subtle discrimination can have drastic effects. Workplace incivility has been shown to be associated with important organizational outcomes, such as higher turnover rates (Cortina et al., 2013), lower job satisfaction (Guidroz, et al., 2010, Miner-Rubino & Reed, 2010) and lower work engagement (Chen et al., 2013). These subtle behaviors can be a contributing factor to the estimated cost of turnover (Burns, 2012). Incivility has been studied among people in different age groups (Lim & Lee, 2011), racial identities (Cortina et al., 2013), different weights (Sliter et al., 2012b), and women (Cortina et al., 2013).

While workplace incivility can be directed toward anyone at work, racial minorities may experience incivility and, in addition, other forms of subtle discrimination, such as racial microaggressions, because they are identified as belonging to a specific racial group. Racial microaggressions are defined as verbal or behavioral treatment that can convey hostility toward members of certain racial groups (Sue, Capodilupo et al., 2007). Racial microaggressions have been shown to be associated with adverse effects, including somatic symptoms (e.g., headaches,

backaches; Ong et al., 2013), depressive disorders (Gee et al., 2007, Huynh, 2012), and the experience of negative emotions (Wang et al., 2011). Racial microaggressions have been examined for a number of racial groups including Asians (Sue, Bucceri et al., 2007), African Americans (Holder et al., 2015; Pitmann, 2012), and Latino/as (Rivera et al., 2010). Although most of the microaggression research has been done in the academic or clinical settings (Sue, Bucceri et al., 2007; Sue, Capodilupo et al., 2007), microaggressions are also likely to occur in the workplace throughout the employment cycle (Kim et al., 2019). However, very few studies have examined racial microaggressions experienced by Asians in the workplace. One qualitative study revealed that Asians do experience a number of racial microaggressions in the workplace (Kim et al., 2015). It is not surprising that microaggressions occur in the workplace. For some people, the workplace may be the first time they interact closely with Asians, and it may be difficult for them to discern what subtle forms of discrimination may look like.

Although Kim et al.'s (2015) qualitative study has been useful in documenting the types of microaggressions that Asians experience, little is known about how to measure the microaggressions that Asians experience at work. The purpose of this dissertation is to create a scale that measures the frequency of microaggressions that Asians experience in the workplace. Despite being a growing portion of the US workforce, few studies have examined subtle forms of discrimination from the perspective of Asians in the workplace (Gee et al., 2007; Sue, Bucceri et al., 2007; Wang et al., 2012). Furthermore, existing microaggression and workplace incivility scales may miss certain nuances in the types of subtle discrimination that Asians experience in the workplace. Currently, the Racial and Ethnic Microaggression Scale (REMS; Nadal, 2011) is one of the few scales that measures racial and ethnic microaggression in the context of people's daily life. However, the REMS may not completely encompass the specific types of

microaggressions that Asians experience (Sue, Bucceri et al., 2007). Additionally, the REMS is not broad enough to encompass all type of microaggressions that may occur in the workplace (Kim et al., 2019). The Workplace Incivility Scale (WIS; Cortina et al., 2001) measures general hostility that could be directed to anyone in the workplace. However, this incivility measure might be too broad because Asians may experience specific forms of hostilities due to the stereotypes of Asians held by others. In light of the shortcomings of both the Racial and Ethnic Microaggression Scale (Nadal, 2011) and the Workplace Incivility Scale (Cortina et al., 2001), there remains a need for the development of a new scale that measures the racial microaggressions that Asians experience in the workplace.

CHAPTER 2

Literature Review

In order to understand how to measure microaggressions towards Asians in the workplace, it is important to understand the stereotypes of Asians that are held by others. These stereotypes may influence the general and specific forms of hostile treatment that Asians experience in the workplace. This literature review is divided into several sections. The first section will review a brief history of the immigration of Asians to the United States. The second section will review literature on the stereotypes of Asians, including the model minority stereotype as well as other stereotypes associated with Asians. The third section will review the racial microaggression literature, focusing on racial microaggressions that manifest in daily life and the workplace, as well as discuss an existing measure of racial microaggression. The fourth section will focus on the workplace incivility literature and its association with organizational attitudes, psychological well-being of employees, and the existing measure of workplace incivility. The fifth section will elaborate on the rationale and the need for a new measure of microaggressions towards Asians that focuses on the workplace.

Asian Immigration History

Since the 1850s, Asian immigrants have been coming to the US in waves to find work (Lee, 2015; Uba, 1994). Chinese immigrants came to the US in large numbers in the middle of the 19th century to work on the transcontinental railroad (Lee, 2015; Takaki, 1989). Following the influx of Chinese immigrant laborers, the US government passed the Chinese Exclusion Act of 1882. This act put a moratorium on skilled and unskilled Chinese laborers from entering the US. The US Supreme Court upheld the constitutionality of the Chinese Exclusion Act in Chae Chan Ping v. United States in 1889, further enforcing the limitation of Chinese labors. While the

Chinese Exclusion Act limited Chinese immigrants, it opened a path for immigrants from other Asian countries (Takaki, 1989). For example, Japanese immigrants came to Hawaii in the 1880s to work on sugarcane plantations (Takaki, 1989). Subsequently, Japanese immigrants came to US mainland to find other work in the 1890s, Korean immigrants in 1900s, South Asian immigrants in the 1910s, followed by Filipino immigrants in the 1920s (Lee, 2015; Takaki, 1989; Uba, 1994). In 1907, Executive Order 589 limited both Japanese and Korean laborers to the US and its territories. Furthermore, the Gentlemen's Agreement of 1907, between the US and Japan, imposed restrictions on Japanese laborers to the United States. Despite policies from the US and other Asian countries limiting the immigration of Asian laborers, Asians have been immigrating to the US since the mid 1800s.

Eventually, the US would reverse its immigration policy barring laborers from Asian countries. One example of this reversal was the repealing of Chinese Exclusion Act in 1943, lifting the restriction of Chinese immigration. Over two decades later, the Immigration and Naturalization Act of 1965 removed previously established quotas for laborers from *all* Asian countries. This act allowed laborers to reunify with their families through the immigration process. It also gave preference to highly educated and highly skilled immigrants. Large waves of Asian immigrants flowed into the US after the Immigration Act of 1965 (Lee, 2015). Later, US military involvement in Southeast Asia brought forth more waves of war refugees. Southeast Asian, comprised of Vietnamese, Laotian, Hmong, and Cambodian people, came to the US in three large waves, after the US-Vietnam War in 1975, the 1980s, and 1990s (Lee, 2015).

The history of Asian immigration to the US has influenced the perceptions of Asian employees. Asians were once perceived as the "yellow peril" (Chun, 1980; Suzuki, 1989; 2002; Tchen & Yeats, 2014). As Chinese laborers came to the US to work on the various projects, such

as the construction of the transcontinental railroad, these laborers drove down wages and took away jobs from other workers (Lee, 2015; Takaki, 1989). This competition angered the white public and created resentment towards Chinese immigrants who were deemed the yellow peril, representing two unique perceptions. First, Asians were thought to be a menace to Western civilization in the 19th century. Second, they were low-skilled laborers, also known by the outdated and offensive term, *coolies*. However, Asians would not only be known just as the yellow peril (Lee, 2015; Tchen & Yeats, 2014). As time moved forward, the stereotype of Asians would change, from *coolies* to *model minority* (Suzuki, 1989), affecting the perceptions of Asians in the workplace for decades to come. The model minority stereotype is likely a direct result of the Immigration Act of 1965 that gave high preference to highly skilled Asian visa seekers.

Model Minority Stereotype

Nowadays, Asians are perceived as the model minority (Suzuki, 2002). The model minority stereotype implies that Asians have "made it" (Sue & Sue, 2003), by exceling academically (BLS, 2014; Sue & Okazaki, 1990) and are financially well-off, (Chun, 1980; Suzuki, 1977; 2002). A shallow examination of the model minority stereotype indicates that Asians have "*made it*" (Sue & Sue, 2003). Asians excelling academically can be exhibited through education achievement rates. Asians have the highest level of educational attainment rate with 59% having earned at least a bachelor's degree compared to Whites (37%), African-Americans (27%), or Hispanics (18%) (BLS, 2014). Furthermore, Asians are reported to be an affluent minority group. This view is solidified through the current reporting of household income. Asian households are the highest income earners ($66,000) compared to White ($54,000), African-American ($33,000), and Hispanic ($40,000) households (Pew Research

Center, 2012). These statistics on education and household income have reinforced the idea that Asians have made it in the US, despite being a minority group (Kim & Sakamoto, 2014; Min, 2006). Additionally, Asians are also *not* seen as a threatening group compared to African-Americans (Sue et al., 2008) and Hispanics (Rivera et al., 2010), enhancing their model minority status. Yet, a closer examination of the model minority stereotype may indicate that Asians are *not* a homogenous group that are all well-educated and financially well-off.

Model Minority Myth

The model minority stereotype provides an incomplete picture of Asians. Broad generalizations of Asians may not detect barriers to education (Mounk, 2014; Woo, 2012). For example, Asians have been discriminated against in the admission process at top tier schools. One example of this discrimination is exhibited through standardized testing in the admissions process. The average standardized test score for Asians is higher than any other racial group in the college admission process, including Whites (Espenshade & Chang, 2005; Mounk, 2014; Woo, 2012). More specifically, Asians must outperform Whites by 140 points, Hispanics by 280 points and African Americans by 450 points on the SAT to be competitive in the college application process (Espenshade & Radford, 2009; Mounk, 2014; Woo, 2012). This evidence reveals that it is harder for Asians to get into more competitive schools given the college admissions process.

The apparent affluence of Asians can be discredited by a closer examination of household income. Statistics can also mask a deeper truth about wage differences (Kim & Sakamoto, 2010; 2014; Min, 2006; Suzuki, 1989, 2002). Although Asian households are reported to earn the most, a deeper examination may prove otherwise (Min, 2006; Suzuki, 1989, 2002). Average annual incomes are typically reported by households, yet one egregious factor is left out – adults per

household (Suzuki, 2002). Not all households comprised of *only* a nuclear family. Some cultures embrace the idea of living with extended family (Suzuki, 1989; 2002). Asians (2.25) and Hispanics (2.27) have the highest number of adults per household, whereas Whites (1.94) and African-Americans (1.82) have fewer adults per household (US Census, 2015). If adults per house were factored in, Asian households would have a similar income to White households, regardless of Asians' higher education level. Thus, by only examining income per household on its own, without incorporating the number of adults within the household, it makes it seem like Asians have achieved greater financial stability (Suzuki, 2002).

Furthermore, when educational degree type is considered, salaries for Asians are less than Whites for each of the following degrees: bachelor ($68,000 vs. $72,000), doctorates ($108,000 vs. $118,000), and professional ($134,000 vs. $147,000, US Census, 2011). These average salaries reveal that while Asians invest as much as Whites into their education, the return on investment for Asians is consistently lower (Kim & Sakamoto, 2010; 2014). Although the perception of the model minority stereotype perpetuates the idea that Asians are highly educated and wealthy, the reality of the model minority myth is that Asians contend with a more rigorous college admissions process and income inequality.

Another problem with using the term "model minority" to describe a diverse group of individuals is that it obscures and conceals the disadvantages and challenges that some Asians may face (Lee et al., 2009; Suzuki, 2002). One group that has been disadvantaged by the model minority stereotype is Southeast Asians. Some Southeast Asians immigrated to the US because of mass murders sanctioned by their own government, while others left their homeland to escape political repression as part of the aftermath of the US-Vietnam war in 1975 (Chung & Okazaki, 1991). Disaggregating data among Asians reveals a hidden story. Even after years of

resettlement, Southeast Asians have one of the lowest college education attainment rates: Vietnamese (26%), Laotian (13%), Hmong (15%), and Cambodian (16%). These education attainment rates are substantially lower than the Asian average of 59% and the national average of 32% (BLS, 2014).

Thus, broad generalizations of Asians can mask the problems and needs of the Southeast Asian community. When the model minority stereotype is projected onto all Asians, somehow Southeast Asians are thought to have suddenly "made it," but that is far from the truth. Southeast Asian immigrants that came to the US on refugee status may not be fluent in English and still require government policy, programs, and services to assimilate to the US workforce (Lee et al., 2009). The notion that Asians do not benefit or need assistance from civil rights and government programs is specious. Furthermore, for Asians with lower education attainment rates, the model minority stereotype may foster shame as some are not able to live up to the "successful" stereotypes (Lee, 1994; Lee et al., 2009; Wong & Halgin, 2006).

Some other challenges that stem from the model minority stereotype are the between groups and within group comparisons. Juxtaposing the "success" of Asians against other groups may highlight the failures of the other minority groups in terms of academic achievement and financial stability, further dividing minority groups. Between the different racial groups, the model minority stereotype could be used as a detestable tool or "racial wedge" to compare Asians against African Americans (Chun, 1980; Lee et al., 2009). This division may also foster resentment or even envy towards Asians (Cuddy et al., 2007). Within groups of Asians, the "success" of Asians can also create a sense of stigma and "loss of face" for some Asians that try to live up to the model minority stereotype, yet do not attain academic success and financial stability (Lee et al., 2009). Not only do Southeast Asians, that recently immigrated to the US,

experience this “loss of face,” but also other Asian groups that have been in the US much longer (Lee, 2015; Lee et al., 2009). These are some of the challenges that Asians likely face because of the model minority stereotype, yet these challenges and disadvantages are rarely the focal points of discussion in equality and race.

Other Stereotypes of Asians

After World War II, one way that Japanese and Chinese workers changed the perceptions of other Americans was to embrace the cultural value of being hardworking, in order to move away from the perceptions that they were sly and treacherous (Petersen, 1966; Sue & Kitano, 1973). The embodiment of hardworking as a cultural value shifted the perceptions of the Chinese and Japanese workers, from “Chink” to “Chinese” and Jap” to “Japanese,” respectively (Ogawa, 1971). The perceptions of being industrious would persist as many other waves of Asian immigrants came to the US to find work (Kitano, 1973, Lee, 2015; Uba, 1994). The selection of highly skilled Asians in the Immigration Act of 1965 further perpetuates the stereotype of Asians as hardworking. Further research on the stereotypes found that Asians emphasize cultural values such as hard work in order to promote upward mobility (Sue & Kitano, 1973). Educational achievement studies have suggested that Asian cultural values have influenced studying and working hard (Sue & Okazaki, 1990). Additionally, non-Asians also view Asians as hardworking people (Lin, 2011; Sy et al., 2010). Lin (2011) showed that non-Asians perceive Asians as hard-working people, and Sy et al. (2010) showed that Asians are viewed as more leader-like when they embrace traits such as *dedication*. While this hard-working stereotype sounds positive, a qualitative study showed that Asians were expected to take on more work compared to other people in a similar role (Kim et al., 2015). Thus, the hard-working stereotype may raise the expectations of others to demand more from Asian employees than employees of other races.

It is important to note that not all current stereotypes associated with Asians are positive. Asians are also viewed as a group of people that lack social skills. Previous research has shown that Asians are perceived to lack fit for a job when social skills are vital for the job, such as sales or public relations positions (Jackson et al., 1996; Lai & Babcock, 2012; Lin et al., 2004; Sy et al., 2010). Jobs in sales or public relations require social perceptiveness in order to be aware of others' reactions. These skills are vital because they promote the public image of the organization to other groups of people. In a study that examined the social skills of job candidates, Asians were not viewed as equally competent as Whites in public relations as opposed to information technology analyst positions (Lai & Babcock, 2012, study 1). Similarly, a typical sales job may require employees to greet customers, promote products, and sell products or other services. In another study that examined the competency of job candidates among different races, Asians were viewed as *less* competent than Whites when the job was sales related (Sy et al., 2010, study 1 & 2). However, Asians were viewed as more competent than Whites when the job was *engineering* related, a job the requires fewer social interactions and more mathematical ability. The perceptions of lack of social skills are exacerbated by the stereotype that Asians are submissive (Kim et al., 2015; Sue, Bucceri et al., 2007). In a study on the perceptions of prototypical managers, Whites viewed Asian managers as *submissive* and *timid* and not as *outspoken* as compared to the prototypical successful manager (Chung-Herrera & Lankau, 2005). These perceptions of quietness, shyness, or not being outspoken drives the narrative that Asians lack the interpersonal skills to communicate with their fellow co-workers or potential customers.

Another negative stereotype about Asians is that some are viewed as lacking English skills. English proficiency is acknowledged as a weak point for Asians who began their

education outside of the US. This perspective is depicted in a Time Magazine article entitled "The New Whiz Kids" (Brand, 1987).

> This inclination for math and science is partly explained by the fact that Asian-American students who began their education abroad arrived in the U.S. with a solid grounding in math but little or no knowledge of English. They are also influenced by the promise of a good job after college. "Asians feel there will be less discrimination in areas like math and science because they will be judged more objectively," says Shirley Hune, an education professor at Hunter College. (Brand, 1987).

Likewise, Sue and Okazami (1990) noted that it was likely that Asian immigrants perceived career limitations, and thus, avoided careers in the social sciences and humanities where strong English and interpersonal skills were vital. Sue and Zane (1985) found supporting evidence that some Asian immigrants purposely chose academic majors that require less English and more quantitative skills (i.e., social sciences vs. mathematics). However, emphasizing technical competence may have its limitations as English proficiency is a necessary skill to get ahead within organizations (Sue & Zane, 1985). While some of these perceptions of Asians were reported in the 1980s, Kim et al. (2015) found that this is still the case; Asians on work visas in the United States were typically assigned to roles that required more mathematical skills, rather than client facing roles, which require more social skills and English proficiency. Because of the stereotypes of Asians held by others, it is likely that Asians will experience subtle forms of discrimination in their interactions with others. These subtle forms of discrimination may manifest in the form of racial microaggressions.

Racial Microaggressions

Racial microaggressions were first conceptualized as subtle, negative or denigrating messages that are viewed as put downs toward African Americans (Pierce et al., 1977). These messages are often automatic, and they can happen with non-verbal communications as well. Later, Sue, Capodilupo et al. (2007) expanded on this construct, describing racial microaggressions as verbal or behavioral treatment that conveys hostility towards members of a certain racial group. Racial microaggressions can be intentional or unintentional. Typically, racial microaggressions are examined from the perspective of people of color (Sue, Capodilupo, et al., 2007) focusing on the experience of African Americans (Holder et al., 2015), Latinos (Rivera et al., 2010) and Asians (Kim et al., 2015; Sue, Bucceri et al, 2007). Microaggression research has also progressed to examine other marginalized groups such as women (Capodilupo et al., 2010) and LGBT people (Nadal, 2013).

Sue, Capodilupo et al. (2007) categorized racial microaggressions into three different forms: microassaults, microinsults, and microinvalidations. Microassaults are explicit racial marginalization through verbal or nonverbal communication (Sue, Capodilupo et al., 2007). These microassaults are meant to hurt the intended victim through name-calling, avoidant behavior, or purposeful discrimination. For instance, calling a person of Asian descent a "*Chink*," "*gook*," "*Charlie*," or other racial names would be a microassault. These strong expressions clearly state that the aggressor feels negatively about the victim, and there is little guesswork that needs to be done about what the aggressor meant with his or her statement.

The second form of racial microaggressions, microinsults, are verbal exchanges that convey rudeness, insensitivity, or demean a person's racial heritage or identity (Sue, Capodilupo et al., 2007). For instance, asking an Asian person born in the US, "Where are you from?" can

lead to a microinsult. If the Asian person says she is from "Virginia" and the perpetrator then asks a second question, "Where are you *really* from?" The second question conveys rudeness in that the perpetrator does not seem to believe that this Asian person is from "Virginia." For the victim, the second question also may convey that she may not belong in the US or that her answer regarding nationality is specious at best. Microinsults can also be viewed as a compliment paired with a slap in the face. For instance, a White person may compliment an Asian person on her English, "Your English is *very* good!" and the Asian person replies pedantically, "Yes, it is because I was born in *Virginia*." While the perpetrator may think praising an American-born Asian person on her English is a compliment, it might be interpreted in a different way. It may imply that the Asian person does not belong in the US, regardless of what she said or that English is somehow her second language having been born and raised in the US. These microinsults convey stereotypic assumptions held by the perpetrator. These slight or snubs may be unbeknownst to the perpetrator, yet the victim may perceive these comments as insulting and insensitive.

The third type of microaggression, microinvalidations, are verbal exchanges that exclude, negate, or nullify the feelings or the experiential reality of a person of color (Sue, Capodilupo et al., 2007). For instance, when a White person says, "I do not see race or color." This message implies that race and color have not and no longer matter. These messages negate the experiences of the person of color, essentially saying that lived experiences do not matter. However, these lived experiences *do* matter. The lived experiences of people of color and White people are quite different in the United States. To say that people of color share the same racial reality as White people would be unrealistic (Sue, Capodilupo et al., 2007).

Consequences of Microaggressions

Some of the negative consequences of microaggression include rumination and strong emotions (Wang et al., 2011). Both microinsults and microinvalidations are seemingly innocuous, yet they can be quite detrimental to the victims regardless of whether they choose to respond or ruminate about it (Wang et al. 2011). If a victim of a racial microaggressions calls out the aggressor, he or she may be deemed as "*overly sensitive*" (Sue, Capodilupo et al., 2007). However, if the victim of a racial microaggression does not call out the aggressor, the victim may spend time ruminating about what the aggressor *really meant* when he or she asked where the victim was from, "Did that person really want to know where I was from? Or was this person trying to start a conversation with me? *Or*, does this person want to know my race or ethnicity without asking me directly?" Other thoughts may also linger, "What does my race have anything to do with the current conversation?" And anger may manifest "Why can't this person just ask me about my race or ethnicity if that is what he is interested in?!" For Asians, research has found links to strong negative emotions such as anger, contempt, and resentment when they thought they had encountered a situation where people treated them differently because of their race (Wang et al., 2011).

There has been a great deal of research on the consequences of experiencing microaggression in daily life (Blume et al., 2012; Gee et al., 2007; Nadal et al., 2014; Walls et al., 2015). Not only can microaggressions elicit negative emotions such as anger, anxiety, and sadness within the targets (Wang et al., 2000), but microaggressions can also have implications for physiological and mental health. Physiologically, racial microaggressions are known to be associated with self-reports of heart attacks (Walls et al., 2015) and sleep disturbances (Steffen & Bowden, 2006). Racial microaggressions have also been linked with increased alcohol

consumption (Blume et al., 2012). Psychologically, racial microaggressions are associated with higher incidents of depressive disorder (Gee et al., 2007; Steffen & Bowden, 2006), negative affect (Nadal et al., 2014; Ong et al., 2013; Wang et al., 2011), and anxiety (Blume et al., 2012).

Racial Microaggression Experienced by Asians

There has been research on the specific types of microaggressions that Asians experience in their daily lives. In a qualitative study, Sue, Bucceri et al. (2007) identified eight types of racial microaggressions experienced by Asians: 1) *Alien in own land* was behavior that conveyed that Asian Americans are perpetual foreigners; 2) *Ascription of* intelligence described perception of being attributed a higher level of intelligence; 3) *Denial of racial reality* described Asians' experience of discrimination, or lack thereof, as "Asians are the new Whites" (Sue, Bucceri et al., 2007, p.94); 4) *Exoticization of Asian American women* portrayed the idea that Asian women made great girlfriends or that Asian women are the sexual pleasurers of White men (Espiritu, 1997); 5) *Invalidation of interethnic differences* indicated that all Asians were the same (Sue, Bucceri et al., 2007); 6) *Pathologizing cultural values/communication style* described the perception of Asian cultural values and communication styles were viewed as undesirable; 7) *Second class citizenship* indicated that Asians were treated as a lesser being because of their race; and 8) *Invisibility* revealed that Asians are overlooked without conscious intention of the perpetrator.

There has also been research on the prevalence of microaggressions experienced by Asians. This study reported that 78% of Asian college students reported experiencing at least one racial microaggression every two weeks (Ong et al., 2013). Research on the consequences of microaggressions towards Asians has shown associations with outcomes such as higher potential risk for depressive disorder (Gee et al., 2007, Huynh, 2012), negative emotions, (Wang et al.,

2011), stress (Huynh, 2012), and somatic symptoms (e.g., headaches, backaches; Ong et al., 2013). These findings suggest that racial microaggressions are prevalent for Asians, and these microaggressions may have multiple harmful outcomes.

Racial Microaggressions in the Workplace

Work is a place where diverse people come together to fulfill the mission and vision set by an organization. Ideally, an organization would provide a safe environment where all employees come together to fully realize the mission and vision. However, this environment is not always safe for everyone. While explicit racial messages are looked down upon and are discouraged within organizations, implicit racial messages may still be ubiquitous. However, little is known about the forms that racial microaggressions may take place at work.

There have been a few studies that have examined microaggressions in the workplace, and these studies mainly focus on the experience of African Americans (Cartwright et al., 2009; Constantine & Sue, 2007; Holder et al., 2015; Pittman, 2012; Sharp-Grier, 2015). In an academic setting, African American faculty reported that they were treated as if they were "diversity specialists" by their peers (Cartwright et al., 2009). In addition, some African American faculty members felt that they were questioned about whether they were stepping out of their realm of expertise when they wanted to teach topics beyond diversity (Cartwright et al., 2009). They frequently reported experiencing microinvalidations and microinsults from White students (Pittman, 2012). For example, faculty members were sometimes assumed to be the hired clerical or administrative help (Pittman, 2012). They consistently felt their credentials were questioned or challenged in the classroom (Cartwright et al., 2009). For example, being called "Miss" rather than "Doctor" (Pittman, 2012) or getting course feedback that said, "*She was more intelligent than I thought she'd be."* (Sharp-Grier, 2015, p. 29). In another study that took place in a

clinical setting, African American clinicians felt that the feedback that they were given by White supervisors was laced with microaggressive behavior (Constantine & Sue, 2007). They were told to "be on time" by White supervisors, perpetuating the stereotype that African American people are consistently late. Similarly, African American clinicians were also told that they were gifted at "multicultural stuff."

In a corporate setting, Holder et al. (2015) found that African American women experienced a number of microaggressions. *Invisibility* described the feeling of being ignored during meetings with co-workers giving limited eye-contact or seeing other fellow employees keep their heads down as they write down something as opposed to actively listening to the speaker. *Exclusion* characterized that notion that African American women were not invited to social events, thus opportunities that are discussed indirectly exclude African American women. *Universal experience* reduced African American women to people who know all other African American people within the organization. *Stereotypes of Black women* described African American women as aggressive people whose credentials are consistently questioned despite these women holding higher positions within the organization (Holder et al., 2015).

Although there has been very little work on the experience of workplace microaggressions experienced by Asians, one recent qualitative study examined the types of microaggressions experienced by Asians in the workplace (Kim et al., 2015). This study interviewed 19 employees from various industries including higher education, human resources and consulting. Participants' age ranged from 23-40 years old, with about 5 years of work experience. They varied in their ethnic diversity including Chinese, Korean, Japanese, Indian, Filipino, Taiwanese, and Vietnamese. Using a modified interview protocol similar to Sue, Bucceri et al., (2007), Asian participants were asked about their experiences of being treated

differently at work because of their race. This study built off of the results of Sue, Bucceri et al.'s (2007) on the microaggressions that Asians experience in the day-to-day life.

For Asians, microaggressions can take different forms in the workplace. Kim et al. (2015) identified seven microaggressions that Asians experience in the workplace. These seven themes were categorized into two different forms, general or stereotype-based microaggressions (Kim et al., 2019). *General microaggressions* are verbal or behavioral treatment enacted toward people of color regardless of their racial group membership or social identity. *Stereotype-based microaggression* are verbal or behavioral treatment that occurs to specific groups of people based on the content of stereotypes that perceivers hold based the victim's race, gender, or identity (Kim et al., 2019).

Five of the microaggression that were experienced by Asians were general microaggressions (Kim et al., 2015). *Invalidation of individual differences* theme was similar to Sue, Bucceri et al.'s (2007) "*invalidation of interethnic differences.*" This theme emphasized that Asians were seen as similar in terms of *internal characteristics* (e.g., "Asians are stingy."), whereas Sue's theme emphasize similarity in physically, external characteristics, between inter-ethnic groups (e.g., "All Asians look alike." "Are you Chinese?" (Sue, Bucceri et al., 2007, p.95). The theme of *invalidation of interethnic difference* represented the perception that Asians felt their co-workers and clients viewed them as one homogenous group. For example, one Chinese female participant indicated that her superior would ask her questions about other Asians the supervisor had met. *"*She [boss] was telling me about this other Asian woman in her apartment building… who never said 'hi,' never talked to her. She asked me... 'Is this an Asian thing?'" (Kim et al., 2015).

Invisibility described the experience of Asians being overlooked by non-Asians (Kim et al., 2015; Sue, Bucceri et al., 2007). This invisibility theme was the same as Sue, Bucceri et al.'s (2007), and it described experiences in the workplace where Asians' contributions were dismissed. For example, a Taiwanese female employee described how her ideas went unheeded, "At the small consulting firm… my [contributions] were not picked up on by my team" (Kim et al., 2015). Another Chinese male mentioned his co-workers avoided eye contact with him even though it seemed like these colleagues were friendly with everyone else. These participants regularly reported being physically present, yet their co-workers treated them as if they were invisible.

Inferiority described treatment where work produced or provided by Asian employees was viewed as substandard or not taken seriously compared to work produced by their White counterparts. One Indian female spoke about the underlying expectations that some employers may have of Asians employees, "The assumption is that [umm] Indians are [umm] hard working, but cheap hardworking labor – you know what I mean?" Outsourcing work to India for the reason for the fact that you can get someone to work 14 hours a day for a quarter of the money is the assumption – I know it." (Kim et al., 2015). Although this quote described Asians are treated as cheap laborers when the work is outsourced, an underlying assumption still persisted that Asians labor was less valuable than White labor.

Being singled out described situations when an individual was singled out because of his or her race. For example, one Taiwanese American female recalled being on an interview panel in which her race was made explicitly salient to her by another member, "'Oh you're the token Asian, you are the token minority in the room so, you know, it would looked like legit, you know?'" (Kim et al., 2015). After hearing that, the participant questioned why she was there to

begin with, “I think everyone there was of a higher rank and I was like, ‘why am I even here?’" The other panelist singled out this participant and made her feel that she was not a legitimate member of the organization by pointing out that it was her race that led to her being on this committee without asking what role the participant might also be playing the on this selection panel.

Demeaning cultural values and communications styles was similar to Sue, Bucceri et al.’s (2007) “*Pathologizing cultural values and communication styles*” theme. Sue, Bucceri et al. (2007) used “pathologizing,” whereas Kim et al. (2015) used “demeaning, in light of the possible undesirable connotation of the word “pathologizing”. This theme denoted treatment that conveyed that Asian cultural values and communication styles were viewed as *less desirable* than the dominant cultural values and communication styles in the workplace, and it conveyed that certain values and communications styles of the dominant culture were ideal or *superior* to values and communication styles of other cultures in subtle ways. For example, an Indian female participant indicated her fellow co-workers did not understand her when she expressed her frustration with her boss at work. She was irritated with her boss, but did not want to confront him directly because of the cultural norms she wanted to adhere to. She expressed that she wanted to communicate with him in a way that gets her point across without being hostile. Her colleagues strongly insisted that she ought to talk to her boss directly about it. “My relationship with my boss whom I’m work for 9 years now is still fairly formal. That’s how I like it. I give him a lot of respect still. Even though he and I have been working together for a long time, we still get along fairly well.” She elaborated on her colleague’s advice on dealing with her boss when there is a problem in the workplace, “Thrash things out with him or barge into his office and let him know this is not ok!” In dispensing this advice, this colleague demeaned the way this

participant was communicating with her boss, neglecting what she mentioned was important to her (Kim et al., 2015).

The two other microaggressions that Asians experienced in the workplace were stereotype-based (Kim et al., 2015). *Stereotype-based microaggressions* are verbal or behavioral treatment that is directed at specific groups of people based on the content of stereotypes that perceivers hold (Kim et al., 2019). *Ascription of math competency* described Asians as excelling in areas related to math, statistics, or data analyses. This theme was similar to Sue, Bucceri et al. (2007) ascription of intelligence. However, this theme emerged in our data focused more on projections of mathematical proficiencies rather than intelligence in general. One Indian female indicated that she was ascribed a certain level of mathematical competence due to her race at work. “Indians are smart, technically savvy, well educated, good at analysis, good at numbers.” (Kim et al., 2015). Another Chinese male participant recalled the type of work assignments that he received were usually math related. He attributed these assignments to his supervisors reducing him to a stereotype, “People will think –ok, you are an Asian. You must be really good at math, stats… that sorta thing.” (Kim et al., 2015) These messages conveyed that Asians are math savvy, thus, they are given work related tasks that are only related to math (e.g., statistical analyses as well as data entry). These ascriptions of math competency are problematic because they limit the roles and responsibilities that an Asian person might be assigned to within the organization. Although statements of *ascription of math competency* sound complimentary at the surface level, they may also have deeper negative implications underneath the surface. When a set of people are assumed to have strong mathematical skills, what else is implied? Does it imply that Asians are proficient at math, but may be incompetent with regards to interpersonal or verbal skills? Participants felt that the *ascription of math competency* was made salient in the jobs they

were assigned (Kim et al., 2015). Although statements of *ascription of math competency* sound complimentary at the surface level, they may also have deeper negative implications underneath, such as lacking English proficiency (Kim et al., 2015; Lin, 2011; Tuan, 1998) or interpersonal skills (Lai & Babcock, 2012; Lin, 2011; Sy et al., 2010).

Submissive/subservience described the tendency for Asians to be characterized as submissive, passive, or docile (Sue, Bucceri et al., 2007). Submissiveness occurred more frequently for Asian females more than Asian males. For example, one Japanese female participant recalled an internal dialogue in which she struggled with fulfilling the submissive stereotype. “It seems like people have impression that if you are Japanese, that you’ll never say ‘No.’ So my [supervisors] can ask me for anything.” She followed up with how she felt about being confined to a submissive/subservient role, “It’s extremely uncomfortable, almost as if I don’t have much value…[because] they think I’m always a follower. (Kim et al. 2015). These subtle experiences can lead to participants questioning their role at work and add unnecessary frustration to their daily lives. In another instance, a Korean female recalled how stereotypes about her played a role in an encounter with school administrator at an “at-risk” school where she was substituting at, “Because I am Asian, and I'm a 5'2 Asian woman. They have these stereotypes of Asians women being submissive, very quiet and not able to control students.” (Kim et al., 2015). This participant elaborated on the perceptions that the administrator had of her after the end of the day. “When I first went there as a substitute, the administrator said, after the day was over, she was actually worried when she first saw me that I would not be able to control the classroom or control the students. So they do have these stereotypes of Asians not being able to speak their mind.” For this participant, this submissive stereotype limited what another person though she was capable of taking on in the workplace (Kim et al., 2015).

Previous research has shown that Asians were consistently viewed as more *submissive* and more *timid* and less *outspoken* than the prototypical successful manager (Chung-Herrera & Lankau, 2005). Given these perceptions, not many people in upper management would say they want to promote employees to leadership roles that are docile and compliant.

In summary, research on microaggressions has come a long way since its conceptualization by Pierce et al. (1977). The construct that was originally conceptualized as slights against African Americans (Pierce et al.,1997) has been extended to Asians (Sue, Bucceri et al., 2007), Latino/as (Rivera et al., 2010) women (Capodilupo et al., 2010) and LGBT people (Nadal, 2013). Microaggressions have been taxonomized by Sue Capodilupo et al.'s (2007) into microinsult, microinvalidation, and microassault. Other researchers have added to the literature by examining the consequences of microaggressions. Unsurprisingly, microaggressions have a negative association with psychological and physiological health (Gee et al., 2007; Huynh, 2012; Ong et al., 2013; Wang et al., 2000). Microaggressions have been categorized into general vs. stereotype-based discrimination (Kim et al. 2019). However, despite this progress, to date, most microaggression research has been mostly qualitative in nature (Cartwright et al., 2009; Constantine & Sue, 2007; Holder et al., 2015; Kim et al., 2015; Pittman, 2012; Sharp-Grier, 2015; Sue Bucceri et al., 2007).

Existing Measures of Racial Microaggression

Measures of microaggressions are important because they allow researchers to capture these elusive forms of discrimination. Explicit forms of discrimination are easy to detect, whereas subtle forms of discrimination are harder to detect. While targets of microaggressions may be aware of microaggressions and its effects, those who commit subtle forms of discrimination may not be aware of these consequences (Kim et al., 2018). For organizations,

one way of reducing subtle forms of discrimination is to detect them by using an existing measure. Once detected, organizations can reduce the indirect costs of these subtle forms of discrimination through training and development to minimize the frequency of these microaggressions. However, organizations can only use this strategy if such a measure exists.

Currently, there have been only a couple published quantitative measures of microaggressions. The Gendered Racial Microaggression Scale (GRMS, Lewis & Neville, 2015) is a 23-item measure that examines the microaggression that Black women experience in day-to-day life. The GRMS measures microaggression that Black women experience in the day-to-day experience. This scale may not be generalizable to Asians in the workplace, given that the stereotypes that Black women experience are different from the stereotypes that Asians experience.

The Racial and Ethnic Microaggression Scale (REMS) broadly examines the day-to-day subtle discrimination that people of color experience (Nadal, 2011). The REMS has been validated and has six sub-scales: 1) *Assumptions of Inferiority* characterizes the assumption that racial and ethnic people are poorly educated; 2) *Second-Class Citizen and Assumptions of Criminality* labels the treatment of racial and ethnic people as potential criminals; 3) *Microinvalidations* describe the treatment of someone else conveying the idea that race or color does not matter; 4) *Exoticization/ Assumptions of Similarity* describes objectification of ethnic and racial people and made the assumption that all people within racial groups are homogenous; 5) *Environmental Microaggressions* represents the lack of positive portrayal of people of color in popular media such as movies, television, and politics; and 6) *Workplace and School Microaggressions* describes hostile treatment in school and the workplace. The REMS has an overall reliability of .88, and the range of reliability for the sub-scales is .72 to .86.

There are two problems with utilizing the REMS (Nadal, 2011) to measure the microaggressions that Asians experience in the workplace. The first problem is that some of the REMS sub-scales (Nadal, 2011) may not encapsulate the experiences of Asian employees. Unlike the assumption of inferiority that describes racial and ethnic minority as poorly educated, the model minority myth perpetuates that idea that Asians are highly educated and wealthy. Furthermore, Asians are also *not* seen as a threatening group compared to African Americans (Sue et al., 2008) and Hispanics (Rivera et al., 2010), enhancing their model minority status and distancing Asians from the assumptions of criminality. *The Microinvalidation* sub-scale that captures sayings, such as "I do not see color" or "people of color do not experience racism anymore" is a topic that may not be explicitly broached in the workplace. Additionally, the sub-scale *Exoticization/ Assumptions of Similarity* objectifies people of color. These behaviors may constitute as workplace harassment an explicit form of hostility rather than a subtle form of hostility. The REMS (Nadal, 2011) assumes that people of color experience similar types of microaggressions, but not all groups of people of color experience the same forms of discrimination. Parsing these differences and understanding the background of systemic oppression can reveal insights into the current subtle forms of discrimination that Asians experience in the workplace.

The second problem is that utilizing the REMS to measure racial microaggressions in the workplace maybe inadequate. Nadal's (2011) *Environmental Microaggression* sub-scale taps into the positive portrayal of racial and ethnic minorities in popular media such as television, magazines, and movies with such items as "I observed people of my race portrayed positively in movies" or "I read popular books or magazines in which a majority of contributions featured people from my racial group." Because Asians are not well presented in popular media, such as

movies, it would be difficult to tap into the positive portrayal of Asians.[2] Therefore, out of these six sub-domains of the REMS, *only* one of the sub-domains could have applied to the microaggressions that Asians experience in the workplace, the *workplace and school microaggressions* subdomain. The workplace and school microaggression sub-scale taps into microaggressions at work, with such items as "I was ignored at school or at work because of my race" or "Someone assumed that my work would be inferior to people of other racial groups." While these items are useful there are only six of them and do not fully encompass the types of subtle discrimination that Asians can experience in the workplace. Thus, the REMS (Nadal, 2011) was intended to measure the microaggressions in the day-to-day life context, not necessarily the workplace.

While Asians are also a marginalized group, their historical context affects the type of discrimination they experience. The REMS (Nadal, 2011) focuses on the experience of racial and ethnic minority experiences as a whole, yet these experiences may differ for Asians as they do not experience other microaggression that African Americans and Latino/a experience (e.g., avoidant behavior in public places or assumption of criminality). Additionally, the REMS examine microaggressions in the situational context of day-to-day experience. The workplace is different because employees have to continue to work with others long after microaggressions have occurred.

[2] Recently, Crazy Rich Asians (2018) is one of the few movies (non-martial arts related) that has an all-Asian cast, before then *only* The Namesake (2006) and The Joy Luck Club (1993) has had a similar cast. Other Hollywood movies that could have cast Asian actors/actresses to play roles of characters of Asian descent chose White actors to portrayed Asians instead. For instance, the Washington Post (Simons, 2016) and Times Magazine (Berman, 2017) reported that, Benedict Cumberbatch played Khan, a villain of Indian descent in Star Trek Into Darkness (2013), Emma Stone depicted a person of half-Asian descent in *Aloha* (2015), Tilda Swinton played the role the Ancient One, a character depicted as an old Tibetan man, in *Doctor Strange* (2016), and Scarlett Johannsson was portrayed as Major Motoko Kusanagi, a super cop from popular Japanese manga, in *Ghost in the Shell* (2017).

Workplace Incivility

Subtle forms of discrimination in the workplace can be specific to a person's racial identity, while other forms of discrimination can be more general and can be directed at anyone in the workplace. These general forms of subtle discrimination may manifest in the form of workplace incivility. While not focused on race-based mistreatment, incivility is a construct that examines subtle discrimination at work. Workplace incivility is defined as low-intensity hostile behavior with ambiguous intent to harm (Andersson & Pearson, 1999). Two characteristics that distinguish workplace incivility from other forms of hostile behavior are the intensity and intentionality of the behavior. Low-intensity is stressed to differentiate workplace incivility from high-intensity hostile behaviors, such as aggression, violence, or harassment. In addition to being low in intensity, the intention of workplace incivility behaviors is ambiguous (Andersson & Pearson, 1999; Pearson et al., 2001). Some examples of workplace incivility include being ignored, demeaned, or spoken to in an inappropriate way (Cortina et al., 2001). While these behaviors may not violate any workplace rules or federal regulations, these incivilities are rude and disrespectful to the targets they are directed toward.

Workplace incivility can be distinguished from other forms of hostile behavior, given the type of intention. Hostile behaviors such as physically attacking a co-worker (Sackett & DeVore, 2001) or socially undermining (Duffy et al., 2002) are clear and intentional. The intent to harm in hostile behavior is clear, whereas the intent to harm in workplace incivility, through behaviors such as ignoring or snubbing someone, is ambiguous (Andersson & Pearson, 1999). Workplace incivility and racial microaggression share similar attributes in that both are subtle forms of discrimination with ambiguous intent. Where workplace incivility and racial microaggressions differ is the target to which these subtle discriminations are directed. Workplace incivility can be

directed at anyone, whereas racial microaggressions are directed toward people who belong to a certain racial group.

Workplace incivility is pervasive throughout the US and other countries. Porath and Pearson (2013) estimated that about 98% of employees in the US have experienced some form of incivility at work. Furthermore, workplace incivility has been investigated in several other countries, such as China (Chen et al., 2013; Wu, Zhang, Chiu & He, 2013) New Zealand (Griffin, 2010), Korea (Kim & Shapiro, 2008), Philippines (Scott et al., 2013), Singapore (Lim & Lee, 2011; Lim & Teo, 2009), and many other countries. Workplace incivility seems to be an experience that is common in the international workforce.

Workplace incivility is a well-researched construct (for review see Schilpzand et al., 2012). It has only been almost two decades since Andersson and Pearson (1999) conceptualized this construct. Many studies have examined the antecedents (Cortina et al., 2013; Lim & Lee, 2011; Sliter et al., 2012b) and consequences of workplace incivility (Chen et al., 2013; Cortina et al., 2013; Guidroz et al., 2010; Lim & Teo, 2009; Miner-Rubino & Reed, 2010). Results from these studies have indicated that employees do not perform or function optimally when they are the victim of uncivil behavior.

Workplace incivility is associated with organizational outcomes. Those who are victims of workplace incivilities typically experience lower organizational support (Han et al., 2016), organizational commitment (Lim & Teo, 2009; Smith et al., 2010; Taylor et al., 2011), and job satisfaction (Guidroz et al., 2010; Miner-Rubino & Reed, 2010). Similarly, those who experience higher levels of workplace incivilities may also experience higher levels of intention to quit (Cortina et al., 2013; Han, et al., 2016), burnout (Blau & Andersson, 2005; Han et al., 2016), and somatic symptoms (Hershcovis et al., 2017).

Moreover, workplace incivility is also associated these other outcomes as well. Workplace incivility is negatively associated with work engagement (Chen et al., 2013), trust (Cameron & Webster, 2011), and levels of energy (Giumetti et al., 2013). With respect to specific emotions, victims of incivility reacted to situations of incivility with increased anger, fear and sadness (Porath & Pearson, 2012). Additionally, research on individual differences, such as neuroticism, indicated that those who are higher on neuroticism were weakly correlated with higher levels of incivility (Milam et al., 2009). The consequences of experiencing incivilities at work may spill over into day-to-day life. This spillover has led to decreased levels of well-being (Cortina et al., 2001; Lim et al., 2008), marital satisfaction (Ferguson, 2012), psychological stress (Cortina et al., 2001; Lim & Cortina, 2005), negative mental health outcomes (Lim et al., 2008), emotional exhaustion (Kern & Grandey, 2009), and emotional burnout (Kern & Grandey, 2009), and increased levels of work-family conflict (Ferguson, 2012; Lim & Lee, 2011). Thus, targets of workplace incivilities experience a wide range of negative effects from subtle hostility at work.

Also, witnessing an act of workplace incivility can also have negative effects on the bystander (Cortina et al., 2001; Porath & Peasrson, 2013). Studies have shown that people that witnessed an act incivility were less creative and performed poorer compared to those who did not witness an act of incivility (Porath & Erez, 2007; Porath & Pearson, 2013). Other studies reveal that those who witnessed incivility had increased psychological distress (Cortina et al., 2001; Lim & Cortina, 2005), detachment from work (Nicholson & Griffin, 2015, Porath & Peasrson, 2013), and higher levels of absenteeism (Sliter et al., 2012a). Furthermore, employees who witness incivilities may also spend time ruminating about the incident and avoiding the incivility instigator (Porath & Pearson, 2013). Like second-hand smoke, witnessing incivilities at

work can have detrimental effects on its bystanders (Chrobot-Mason et al., 2013).

Furthermore, workplace incivilities can have a negative financial impact on organizations that tolerate such behavior. It is estimated that workplace incivilities can cost organizations up to $14,000 per employee because of decreased work efforts, increased time spent not working, and intentional decrease in quality of work (Pearson & Porath, 2009; Porath & Pearson, 2013). Employee turnover due to uncivil behavior in the workplace is also costly. Replacing an employee could cost organizations as much as two the annual salary of that employee (Cascio & Boudreau, 2008). Thus, workplace incivility can be an enormous cost to organizations. In addition to the costs associated with turnover, stress induced by workplace incivility can also affect the organizations bottom line. It also should be noted that job stress can cost US organizations $300 billion a year (Leiter & Maslach, 2005), and a great deal job stress can be derived from workplace incivility (Pearson & Porath, 2009).

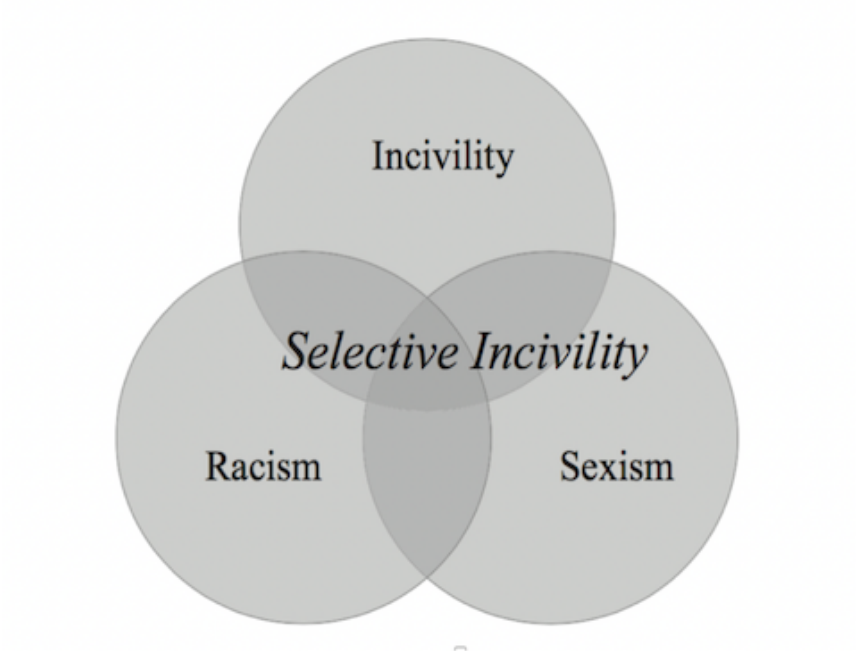
Incivility in the workplace can arise from multiple sources including supervisors and co-workers. However, most measures of incivility do not differentiate incivility among supervisor, co-workers, or customers. It could be that an act of incivility from a supervisor may affect a subordinate more than an act of incivility from a co-worker, because the subordinates may depend the supervisor for annual performance evaluations and career development. However, Porath and Erez (2007) have shown that participants that experienced incivility from an authority figure, stranger, or imagined person all had lower task and creative performance on ratings compared to those who did not experience any uncivil behavior. While the research on the sources of incivility is limited, these results showed that incivility affected the performance of employees in general, regardless of the source (Porath & Erez, 2007).

Research has also indicated that some people are more likely to experience incivility at

the workplace. Racial minorities are more likely to experience more incivility than non-minorities (Cortina et al., 2013), younger people experience more incivility than older people (Lim & Lee, 2011), and people who are overweight experience more incivility than people at a healthy weight (Sliter et al., 2012a). Furthermore, Cortina et al. (2013) reported that women experience more incivilities than men. These studies suggested that the intersectionality of incivility and group identity might play a role in the experience of hostile behavior. Despite the abundant amount of research on workplace incivility, little is understood about the *group-specific* hostilities in the workplace (Cortina et al., 2013). Incivility is *not* always general, and incivility could occur selectively toward people of color and women as a modern form of discrimination (Cortina, 2008; Cortina et al., 2013; Kabat-Farr & Cortina, 2012). Cortina (2008) argues that *selective incivility* is the intersection of incivility, racism, and sexism (see Figure 1). While incivility, racism, and sexism differ in terms of the target of uncivil behavior, these constructs are similar in that they describe behaviors that degrade, intimidate, or offend the victims. There has been research regarding the selective incivility that women experience as attorneys (Cortina et al. 2002), university faculty members (Richman et al., 1999), and federal court employees (Cortina et al., 2002). However, little is known about the selective incivility that Asians experience in the workplace. While there exist measures of subtle discrimination that racial and ethnic minorities experience and incivility in the workplace, neither of these measures completely capture the nuance of subtle hostile behaviors that Asians experience in the workplace.

Figure 1

Selective incivility diagram (from Kabat-Farr & Cortina, 2012)



Existing Measure of Workplace Incivility

The Workplace Incivility Scale (WIS; Cortina et al., 2001) has been widely used in incivility research and is the most frequently used measure of incivility (Blau & Anderrsson, 2005; Cortina et al., 2001; Meier & Spector, 2013; Miner-Rubino & Cortina, 2004; Schilpzand et al., 2012). The WIS has been modified and applied to examine gender incivility (Miner-Rubino & Cortina, 2004). Similarly, it has been shortened and applied to longitudinal studies (Meier & Spector, 2013). Some researchers have even modified the WIS by reversing some of the items (Blau & Anderrsson, 2005). The WIS is a widely used measure of general incivility that measures general hostility that is directed at everyone in the workplace. However, because the WIS is general measure of incivility, this scale may not be able to discern the group-specific

subtle hostility that Asians experience. While the existing workplace incivility measure assesses general incivility well, it is inadequate when examining selective incivility. The WIS measures general subtle hostility directed toward anyone, regardless of group membership (Cortina et al., 2001). Thus, one of its short comings is that it is inadequate when it comes to measuring stereotype-based subtle discrimination.

Rationale for Current Study

Historically, Asians have been perceived negatively in the workplace. Asians were once known as the yellow peril, a menace to western society, and low-skilled labors, coolies (Chun, 1980; Suzuki, 1989; 2002; Tchen & Yeats, 2014). Now, they are associated with the model minority stereotype. While more explicit racism has decreased, these subtle forms of racism still persist, and they may manifest in the workplace (Dovidio et al., 1986; Kim et al., 2015). Asian employees may experience a mixture of general and specific stereotype-based microaggressions in the workplace. The workplace may activate specific stereotypes of Asians that may be less salient outside of work. Workplace incivility can be directed at anyone at work, yet subtle expressions of racial prejudice do not necessarily happen to everyone. Group-specific incivility will, most likely, *only* happen to employees who belong to a certain racial group. Therefore, the REMS (Nadal, 2011) which examines microaggression experiences of racial and ethnic minorities as a whole, may not be nuanced enough to examine the specific stereotype-based microaggressions that Asians experience. Additionally, the REMS examine microaggressions in a day-to-day context, not the workplace (except for one subscale, the workplace and school microaggression subscale). Microaggressions in daily life often involves strangers with whom one expects no further interactions. This is not true of the workplace. People will have to continue to interact with other employees for months, years, or even an entire career.

Furthermore, the WIS (Cortina et al., 2001) may miss the nuanced hostilities directed at Asians in the workplace, as a function of Asian stereotypes held by others. Currently, there is no known measure of microaggressions that Asians experience in the workplace. While explicit racism is easy to recognize, subtle forms of discrimination can be elusive. Having a better understanding of these subtle forms of microaggressions can also minimize the physiological and psychological harm that is associated with it as well as the cost associated with it from turnover. Thus, there remains a need for the development of a new scale that measures the general and stereotype-based microaggressions that Asians experience. The proposed study will develop and validate a scale that examines the general and stereotype-based microaggressions that Asians experience in the workplace.

CHAPTER 3

METHOD

Content Validation Study

Guidelines established by DeVellis (2003) were used in the development of the workplace racial microaggressions for Asians and Asian Americans (WRMS-AAA). Five phases were conducted to develop and validate the WRMS-AAA. Phase 1 incorporated the construction of the initial scale and the content validation study. In this phase, items were generated based on extant theory, and subject matter experts rated the generated items on their relevance, clarity, and provided other open-ended feedback. Phase 2 was an exploratory factor analysis to determine the structure of the factors based on items generated in phase 1. Phase 3 was a confirmatory factor analysis to confirm the structure of the factors found in phase 2. Phase 4 utilized the confirmed structure of the scale to examine convergent and discriminant validity. Phase 5 examined the concurrent validity of the scale by correlating it with established scales of organizational outcomes, such as organizational support, commitment, job satisfaction, intention to quit, burnout, and somatic symptoms. Together, these five phases provided the initial evidence for the structure of the scale as well as established the reliability and validity for the newly developed workplace racial microaggression scale for Asians and Asian Americans (WRMS-AAA).

Phase 1

Scale Construction and Content Validation

The first guideline DeVellis (2003) identified in developing a scale is to determine what to measure. To aid in the clarity of what to measure, DeVellis (2003) suggested that scale development should be informed by extant theory. Microaggression theory posits that brief messages can demean people because of their group membership (Torino et al., 2018). Through

the perspective of microaggression theory, a definition of the construct of workplace racial microaggressions toward Asians was developed. We defined workplace racial microaggressions toward Asians as the *general or specific expressions of subtle hostility through verbal or behavior communications that demean Asian employees in the workplace* (Kim et al., 2015; Sue, Capodilupo et al., 2007).

Item Pool Development

DeVellis' (2003) second guideline is to generate an item pool. Items were generated based on the domain of microaggressions that Asians may experience in the workplace. A literature review was conducted based on the definition of workplace racial microaggressions towards Asians. We found that microaggressions could be classified into two categories, general and stereotype-based microaggressions (Kim et al., 2015). General microaggressions might apply to other minorities within the organization, and stereotype-based microaggressions might pertain only to Asians based on the stereotypes of Asians held by others (Kim et al., 2015). Below are ten potential sub-domains of microaggressions that Asians might experience in the workplace, along with a brief definition of each sub-domain. Of these 10 sub-domains, five were deem relevant for general microaggression (Kim et al., 2015; Sue, Bucceri et al., 2007) and five were deemed relevant for stereotyped-based microaggressions (Kim et al., 2015, Lai & Babcock, 2012; Lin, 2011; Sue, Bucceri et al., 2007; Sy et al. 2010).

Stereotype-based microaggressions

1. Ascription of Math Competency – the tendency for Asian employees to be treated as excelling in areas related to math, statistics, or data analysis (Kim et al., 2015, Sue, Bucceri et al., 2007; Sy et al. 2010)
2. Hard Working Expectations – the tendency for Asian employees to be treated as hard workers (Lin, 2011; Sy et al. 2010)
3. Lacking Interpersonal Skills – the tendency for Asian Employees to be treated as if they lacked interpersonal skills (Lai & Babcock, 2012; Lin, 2011; Sy et al., 2010)
4. Submissiveness/subservience – the tendency for Asians to be characterized as submissive, passive, or docile (Kim et al., 2015, Sue, Capodilupo et al., 2007)

5. Lacking English Skills – the tendency for Asian employees to be treated as if they lacked English skills (Lin, 2011)

   General Microaggressions
6. Mistaken Identity – the tendency for non-Asian employees to mistake one Asian employee for another Asian employee or as having a different Asian ethnicity other than their actual ethnicity (Kim et al., 2015, Sue, Bucceri et al., 2007)
7. Ignored – the tendency for Asian employees to be ignored or overlooked (Kim et al., 2015; Lin, 2011; Nadal, 2011; Sue, Bucceri et al., 2007)
8. Lack of Recognition – the tendency for Asian employees to go unrecognized for their work or treated as though the work they produced was substandard (Kim et al., 2015)
9. Race Made Salient – the tendency for Asian employees to be singled out because of their race (Kim et al., 2015)
10. Demeaning Cultural Values & Communication Styles – the tendency for Asian employees to be treated as if their cultural values and communication styles were less desirable or that the dominant culture was superior (Kim et al., 2015; Sue, Bucceri et al., 2007)

Items were generated based on these 10 sub-scales. Three to eight items were generated for each sub-scale. Originally, 44-items were developed for the content validation study.

Scale Format

The third guideline is to determine the response format of the scale (Devellis, 2003). A 5-point Likert scale was used for the response format. This format was consistent with Cortina's WIS (Cortina, 2001; Cortina et al., 2013). The 5-point scale assessed the frequency of microaggression occurrence over a 1-year timeframe. This frequency rating ranged from 0 (never) to 4 (most of the time). We chose to use a 1-year timeframe because this closely matched with the recent version of the workplace incivility scale (Cortina et al, 2013). Thus, the following directions preceded the scale:

> *"Please rate the following statements on a frequency scale of 0 (never) to 4 (most of the time). Thinking about your experience in the WORKPLACE within the PAST YEAR, how frequently did your supervisor, co-worker, client, or subordinate…"*

Expert Panel Review

Devellis' (2003) fourth guideline suggests that items be reviewed for relevancy by a group of subject matter experts. A group of experts was identified through the dissertation committee. These experts were nationally or locally recognized professionals in the field of microaggression, incivility, or related fields. They were invited to participate in the content validation study.

Participants

Twenty (14 females, 6 males) experts were invited to participate in the content development of the WRMS-AAA. Nine people participated (response rate = 45%, 100% female). Two participants indicated that incivility, microaggression, or the treatment of Asian and Asian Americans in the workplace was NOT their realm of expertise, thus they were removed from the content validation analysis. This left seven subject matter experts (35% completion rate, 100% female, see Table 1). These participants (M_{age} = 37.71, *SD* = 6.42) provided feedback on the 44-items. Experts, on average, had 14 years (*SD* = 5.26) of experience in their respective field. Participants identified as Asian (42%), Black/African American (29%), or White/Caucasian (29%). Data were collected from September to October 2019.

Table 1

Characteristics of Subject-Matter Experts (SME)

SME	Degree	Area of Expertise	Gender	Exp.
Expert 1	Ph.D., Developmental Psychology	Relational approaches to self and identity; Protective influences in development	Female	15
Expert 2	Ph.D., Social Psychology	Prejudice and discrimination, from the target's perspective, microaggressions.	Female	17
Expert 3	Ph.D., Counseling Psychology	White racial identity development; manifestation & impact of microaggressions	Female	22
Expert 4	Ph.D., Social-Organizational Psychology	Stereotyping; stereotype threat; gender & diversity in careers; women in science careers	Female	15
Expert 5	Ph.D., Counseling Psychology	Race and racism, gender and sexism, gendered racism, women's health	Female	13
Expert 6	Ph.D., Candidate in Clinical Psychology	Micro interventions and strategies for microaggression	Female	11
Expert 7	Ph.D., Candidate Counseling Psychology	Micro interventions and strategies for microaggression	Female	5

Procedure

Participants were recruited through email for the content validation study (see Appendix A). The email contained a link to a google form, which hosted the survey. After participants consented to the study, they were told that the items were generated based on the domain of microaggressions that Asians and Asian Americans may experience in the workplace. Participants provided three forms of feedback on each of the 44-items. Upon completion, experts were entered for a $25 gift card as an incentive for their participation.

Measures

Experts were provided a brief description of each of the 10 sub-domains of microaggressions. They were asked to rate each item on its relevancy, clarity, and provided open ended feedback on how to improve the item. First, experts rated the relevancy of each item based on a 4-point scale (*1 = not relevant, 2 = somewhat relevant, 3 = quite relevant*, and *4 = highly*

relevant, Davis, 1992*)*. Second, participants rated the clarity of each item based on a 4-point scale, (*1 = not clear at all, 2 = somewhat clear, 3 = quite clear*, and *4 = very clear*). SMEs were instructed to comment, if necessary, on the content and redundancy of each item. They were also asked to give feedback on the wording of the items so that these items would be consistent with the microaggression sub-domain (see Appendix B). Finally, participants answered a few demographic questions (see Appendix C). All three forms of feedback were used to reduce and refine the initial set of 44-items.

Content Validity Index

Once the data were collected from subject matter experts, the relevancy ratings were used to create two indices (Lynd, 1986). The first index was the item content validity index (I-CVI). The I-CVI is the percentage of agreement deemed to be relevant for that item. The I-CVI was derived from the 4-point relevancy scale, (*1 = not relevant at all, 2 = somewhat relevant, 3 = quite relevant, and 4 = highly relevant*) (Davis, 1992). In order to compute the I-CVI, responses were dichotomized into, *not relevant* (1s and 2s) or *relevant* (3s and 4s) (Polit & Beck, 2006). The I-CVI or percentage of agreement was represented by the following formula (from Polit & Beck, 2006):

$$\text{I-CVI} = \frac{\text{Number of experts agreeing on items rated as 3 or 4}}{\text{Total number of items}}$$

For example, item 1 in Table 2 has five out of six experts agreeing that it is a relevant item, thus it has an I-CVI of .83. Lynd (1986) has developed criteria for I-CVI acceptability levels. These criteria were dependent upon the number of experts. She recommended at least three experts, but no more than ten as necessary for content validation. In an expert panel of five or fewer experts, all experts must agree on the relevancy of an item for it to be considered acceptable (I-CVI = 1.00) However, in an expert panel of six to eight experts, the acceptable I-CVI could be relaxed

to .83, allowing for one “not relevant” rating. With nine experts, the minimum I-CVI could be lower to .78, allowing two experts to dissent on an item. Other researchers (Tilden et al., 1990) recommend from 2 to 20 content experts.

The second index that was created based on the relevancy ratings was the scale content validity index (S-CVI). The S-CVI is the average percentage of items judged to be relevant for the entire scale (Lynd, 1986). One way to compute the S-CVI is to take the relevant proportion from each rater and average across the raters. In Table 2, all six experts rated 9 out of 10 items as relevant ((.9*6)/6 = .90), thus the S-CVI for this 10-item scale is .90. Scale developers have suggested having a requirement of at least a .80 level of agreement for the S-CVI to be deemed acceptable (Davis, 1992; Grant & Davis, 1997). If the I-CVI and S-CVI values do not meet the minimum requirements, it is suggested that items with lower relevancy ratings be removed until acceptable I-CVI and S-CVI values yield. Both the I-CVI and S-CVI were key in refining the WRMS-44.

Table 2

Fictitious Ratings on a 10-Item Scale by Six Experts: Items Rated 3 or 4 on a 4-Point Relevance Scale (from Polit & Beck, 2006)

Item	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	Number in Agreement	Item CVI
1	—	X	X	X	X	X	5	.83
2	X	—	X	X	X	X	5	.83
3	X	X	—	X	X	X	5	.83
4	X	X	X	—	X	X	5	.83
5	X	X	X	X	—	X	5	.83
6	X	X	X	X	X	—	5	.83
7	X	X	X	X	X	X	6	1.00
8	X	X	X	X	X	X	6	1.00
9	X	X	X	X	X	X	6	1.00
10	X	X	X	X	X	X	6	1.00
Proportion Relevant:	.90	.90	.90	.90	.90	.90	Mean I-CVI = .90 S-CVI/UA = .40 Mean expert proportion = .90	

I-CVI, item-level content validity index.
S-CVI/UA, scale-level content validity index, universal agreement calculation method.

While the I-CVI and S-CVI facilitated the process of retaining, modifying, or discarding specific items through consensus, one criticism of the I-CVI is that it does not account for the probability of experts randomly agreeing with each other by chance (Wynd & Schaefer, 2002). [3] Thus, an additional analysis was necessary to account for the possibility of experts randomly agreeing with each other by chance. The kappa statistic is a measure of inter-rater agreement that accounts for chance of agreement among raters. Fleiss' kappa (1971) was used, as it accounted for multiple raters. Acceptable Fliess' kappa values ranged from .40-.59 (fair), .60-.74 (good), and greater than .74 (excellent). Fleiss' kappa was represented in the following formula, where

[3] Lawshe's (1975) content validity ratio (CVR) was also considered. The CVR is a transformation of a percentage of experts indicating which items are essential to the domain. The CVR's calculation is simple, yet its value range can be counter intuitive, ranging from -1 to 1, where -1 is 0% agreement, 0 is 50% agreement and 1 is 100% agreement. Furthermore, the CVR accounts for chance of agreement based on unique critical values (Lawshe, 1975; Table 1) that *might be*, although not indicated, derived from a binomial distribution (Lindell & Brandt, 1999), whereas Fleiss kappa's chance of agreement *is* derived from a binomial distribution (Polit et al., 2007).

"pc" is the probability of raters randomly agreeing with each other by chance (Polit et al., 2007). Fleiss' kappas were derived using the I-CVI through the following formula.

$$\text{Fleiss kappa} = \frac{\text{(I-CVI - pc)}}{\text{(1- pc)}}$$

In order to refine the newly developed scale, an initial analysis of the I-CVI, S-CVI and Fliess' kappas were computed. First, the I-CVI were computed for the WRMS-44. The I-CVI represented the percentage of agreement for each item among raters. Of the 44 items, 14 items received 100% agreement, 19 items received 86% agreement, 10 items received 71% agreement, and 1 item received 51% agreement (see Table 3). I-CVI ranged from .57 to 1.00, with an overall average I-CVI of .88 for the 44 items. These results indicated that 11 items, more specifically items 2, 7, 9, 10, 12, 14, 21, 28, 36, 41, 44, did not meet the minimal levels of agreement of .83 for a panel of seven experts (see Table 3).

Table 3

Ratings on a 44-Item Scale by 7 Experts: Items Rated 3 or 4 on a 4-Point Relevance Scale

Item	Exp. 1	Exp. 2	Exp. 3	Exp. 4	Exp. 5	Exp. 6	Exp. 7	Agree Count	I-CVI	Fleiss' Kappa	Decision
1	no	yes	yes	yes	yes	yes	yes	6	.86	.85	Keep
2	no	yes	yes	no	yes	yes	yes	5	.71	.70	Remove
3	no	yes	yes	yes	yes	yes	yes	6	.86	.85	Keep
4	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
5	no	yes	yes	yes	yes	yes	yes	6	.86	.85	Keep
6	yes	yes	yes	no	yes	yes	yes	6	.86	.85	Keep
7	no	yes	yes	no	yes	yes	yes	5	.71	.70	Remove
8	no	yes	yes	yes	yes	yes	yes	6	.86	.85	Keep
9	no	yes	yes	no	yes	yes	yes	5	.71	.70	Remove
10	no	yes	yes	no	yes	yes	yes	5	.71	.70	Remove
11	no	yes	yes	yes	yes	yes	yes	6	.86	.85	Keep
12	no	yes	yes	no	yes	yes	yes	5	.71	.70	Remove
13	no	yes	yes	yes	yes	yes	yes	6	.86	.85	Keep
14	no	yes	yes	no	yes	yes	yes	5	.71	.70	Remove
15	yes	no	yes	yes	yes	yes	yes	6	.86	.85	Keep
16	yes	yes	yes	no	yes	yes	yes	6	.86	.85	Keep
17	yes	yes	yes	yes	yes	no	yes	6	.86	.85	Keep
18	yes	no	yes	yes	yes	yes	yes	6	.86	.85	Keep
19	yes	yes	yes	no	yes	yes	yes	6	.86	.85	Keep
20	yes	yes	yes	no	yes	yes	yes	6	.86	.85	Keep
21	no	yes	yes	no	yes	yes	yes	5	.71	.70	Remove
22	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
23	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
24	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
25	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
26	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
27	yes	yes	yes	no	yes	yes	yes	6	.86	.85	Keep
28	no	yes	yes	no	yes	yes	yes	5	.71	.70	Remove
29	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
30	yes	yes	yes	no	yes	yes	yes	6	.86	.85	Keep
31	yes	yes	yes	no	yes	yes	yes	6	.86	.85	Keep
32	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
33	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
34	no	yes	yes	yes	yes	yes	yes	6	.86	.85	Keep
35	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
36	no	yes	yes	no	yes	no	yes	4	.57	.54	Remove
37	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
38	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
39	yes	yes	yes	no	yes	yes	yes	6	.86	.85	Keep
40	yes	yes	yes	yes	no	yes	yes	6	.86	.85	Keep
41	yes	no	yes	no	yes	yes	yes	5	.71	.70	Remove
42	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
43	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
44	yes	no	yes	no	yes	yes	yes	5	.71	.70	Remove
Total	28	40	44	25	43	42	44		Mean I-CVI = .86		
%	65	91	100	56	97	95	100		Mean S-CVI = .86		

Second, the S-CVI was computed for the WRMS-44. The S-CVI is the average percentage of items determined to be relevant for the entire scale. The S-CVI ranged from .56 to 1.00, with an overall mean of .86. This S-CVI statistic indicated that there were high levels of agreement among raters for the entire scale (Davis, 1992; Grant & Davis, 1997).

Third, Fleiss' kappa was computed for each item. Kappa results revealed that 14 items received 100% agreement, 19 items received 85% agreement, 10 items received 70% agreement, and 1 item received 54% agreement. Kappa scores ranged from .54 to 1.00 for the 44 items. The kappa statistic results were similar to the I-CVI results. As the kappa results were formulated based on the I-CVI results, the same 11 items did not meet criterion set by Lynd (1986) (see Table 3). Kappa values supported the decision to keep items that had 6 or 7 experts agreeing on its relevancy. Overall, the I-CVI and kappa scores indicated that 11 items did not meet the minimum level of agreement. The S-CVI, on the other hand, indicated that the average level of agreement within the entire scale was acceptable (see Table 3). Based on the I-CVI and Fliess' kappa results, 11 items with low levels of agreement were discarded. Based on the aforementioned recommendation, I-CVI, S-CVI, and Fliess' kappa were re-run until acceptable values yielded (Davis, 1992; Grant & Davis, 1997; Lynd, 1986).

After honing the scale down to 33-items, I-CVI, S-CVI and Fliess' kappas were computed again. For the I-CVI, 14 items had 100% agreement and 19 items had 86% agreement. I-CVI ranged from .86 to 1.00 for the 33 items (see Table 4). These I-CVI results indicated that it met the threshold of the minimal level of agreement within each item (Lynd, 1986). The S-CVI ranged from .79 to 1.00, with an overall average of .92 for the 33-items. These S-CVI results further confirmed high levels of agreement among raters for the entire scale (Davis, 1992; Grant

& Davis, 1997). Fleiss' kappa for the 33-item revealed that 14 items received 100% agreement and 19 items received 85% agreement. All these statistics, I-CVI, S-CVI, and Fleiss' kappa indicated that these 33 items were at or above acceptable levels of agreement (Davis, 1992; Grant & Davis, 1997; Lynd, 1986).

Table 4

Ratings on a 33-Item Scale by 7 Experts: Items Rated 3 or 4 on a 4-Point Relevance Scale

Item	Exp. 1	Exp. 2	Exp. 3	Exp. 4	Exp. 5	Exp. 6	Exp. 7	Agree Count	I-CVI	Fleiss' Kappa	Decision
1	no	yes	yes	yes	yes	yes	yes	6	.86	.85	Keep
3	no	yes	yes	yes	yes	yes	yes	6	.86	.85	Keep
4	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
5	no	yes	yes	yes	yes	yes	yes	6	.86	.85	Keep
6	yes	yes	yes	no	yes	yes	yes	6	.86	.85	Keep
8	no	yes	yes	yes	yes	yes	yes	6	.86	.85	Keep
11	no	yes	yes	yes	yes	yes	yes	6	.86	.85	Keep
13	no	yes	yes	yes	yes	yes	yes	6	.86	.85	Keep
15	yes	no	yes	yes	yes	yes	yes	6	.86	.85	Keep
16	yes	yes	yes	no	yes	yes	yes	6	.86	.85	Keep
17	yes	yes	yes	yes	yes	no	yes	6	.86	.85	Keep
18	yes	no	yes	yes	yes	yes	yes	6	.86	.85	Keep
19	yes	yes	yes	no	yes	yes	yes	6	.86	.85	Keep
20	yes	yes	yes	no	yes	yes	yes	6	.86	.85	Keep
22	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
23	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
24	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
25	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
26	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
27	yes	yes	yes	no	yes	yes	yes	6	.86	85	Keep
29	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
30	yes	yes	yes	no	yes	yes	yes	6	.86	.85	Keep
31	yes	yes	yes	no	yes	yes	yes	6	.86	.85	Keep
32	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
33	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
34	no	yes	yes	yes	yes	yes	yes	6	.86	.85	Keep
35	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
37	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
38	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
39	yes	yes	yes	no	yes	yes	yes	6	.86	.85	Keep
40	yes	yes	yes	yes	no	yes	yes	6	.86	.85	Keep
42	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
43	yes	yes	yes	yes	yes	yes	yes	7	1.00	1.00	Keep
Total	26	31	33	25	32	32	33		Mean I-CVI = .92		
%	79	94	100	76	97	97	100		Mean S-CVI = .92		

Finally, open-ended feedback on the 33 items that were retained was taken into consideration. Changes that stemmed from open-ended feedback varied from small grammatical changes to other minor wording changes. For example, item 11 was changed from "*interpersonal abilities*" to "*interpersonal skills*." Item 35 was changed from, "*give more credit to your co-worker than you, even though the work was evenly distributed*?" to "*give more credit to your co-worker (non-Asian) than you, even though you both contributed equally*?" This change helped to clarify the context and race of the comparison person. After these changes based on the open-ended feedback were made, these 33-items were move to the next phase of the study.

Phases 2 through 5

According to DeVellis (2003), the next step in scale development was to evaluate items and optimize the length of the scale. Thus, the goal of phase 2 was to conduct an exploratory factor analysis (EFA) to determine the factor structure, as well as determine which items were related to which factors and how factors were correlated with each other. DeVellis (2003) noted that if the sample size was large enough, it could be split into two samples. One sample could serve as the developmental sample, while the other sample could be used as a cross check for the developmental sample results. Thus, the total sample of participants were randomly split into one of two samples, one sample was utilized for the exploratory factor analysis (phase 2), while the other sample was used for the confirmatory factor analysis (phase 3). The goal of phase 3 is to conduct a confirmatory factor analysis (CFA) and provide further support for the structure and reliability of the scale.

DeVellis (2003) suggests including other validated measures to the administration of the newly developed scale to determine convergent and discriminant validity (phase 4). The two samples used in phases 2 and 3 will also be utilized in phase 4 to provide convergent and

discriminant validity. The goal of phase 4 was to provide convergent and discriminant validity evidence for the WRMS-AAA. Both the workplace incivility scale (Cortina et al., 2013) and REMS (Nadal, 2011) should be highly related the WRMS-AAA. Strong correlations between the WIS (Cortina et al. 2013) and REMS (Nadal, 2011) should provide convergent validity evidence for the WRMS-AAA. Similarly, it was necessary to measure the WRMS-AAA's unrelatedness to other existing measures that do not tap into the phenomenon of microaggressions in the workplace. Neuroticism (Barrick & Mount, 1991) is an established measure of personality that taps into anxiety and other negative thoughts. Previous research has shown that neuroticism was weakly correlated with measures of incivility (Milam et al., 2009). Social desirability is a measure of people's tendency to project a favorable image of themselves (Crowne & Marlowe, 1960; Reynolds, 1982). There should be a weak or no correlation between social desirability and the WRMS-AAA. Weak to no correlations between neuroticism and social desirability should provide evidence of discriminant validity for the WRMS-AAA.

The goal of phase 5 was to provide concurrent validity evidence. Existing measures of organizational outcomes should be moderately correlated with the WRMS-AAA. Similar to phase 4, the two samples used in phases 2 and 3 will also be used in phase 5 to provide concurrent validity. Participants that completed the workplace microaggression scale will also complete other established scales on perceived organizational support (Eisenberger et al., 1986), organizational commitment, (Mowday et al., 1979), job satisfaction, (Judge et al., 1998), intention to quit (Colarelli, 1984), burnout (Demerouti et al., 2003), and somatic symptoms, (Spitzer et al., 2010). It is expected that the WRMS-AAA will be negatively correlated with perceive organizational support (Eisenberg et al., 1986), organizational commitment (Mowday et al., 1979) and, job satisfaction (Cammann et al., 1983). Conversely, it is expected that the

WRMS-AAA would be positively associated with intentions to quit (Corlarelli, 1984) and burnout (Demerouti et al., 2003) as well as somatic symptoms (Ong et al., 2013). Moderate correlations between organizational outcomes and the WRMS-AAA would provide evidence of concurrent validity for the WRMS-AAA.

Participants

For the main study, participants were recruited through various online forums, such as MTurk, affinity groups, and social media platforms. Social media platforms included groups such as Facebook and LinkedIn. A snowball technique was used to recruit participants via contacts on social media, as well as specific Asian affinity groups within the social media platforms (see Appendix D). Among the various forums, participants came from social media (41.6%), MTurk (40.7%) or affinity groups (17.7%).

Four-hundred forty-seven participants completed the WRMS-33, of which 381 completed the entire battery of measures. Data were scrutinized for quality assurance. More specifically, completion time and attention checks were examined closely. The battery of measures had over 150 items, a cutoff time of at least seven minutes was determined as sufficient for the fastest survey-taker. This cutoff time would have allowed for about three seconds per question. Participants who completed the battery of measures faster than seven minutes were removed from subsequent analyses. With this cutoff, 22 participants were removed, reducing the number of participants to 425.

Throughout the battery of measures, attention checks were added to ensure participants were engaged while completing the online survey. An example of an attention check was "*please select "agree" if you are paying attention*." Participants who correctly answered attention checks, at least 50% correctly, were deemed as engaged while completing the online survey.

Based on these attention checks, an additional 14 participants were moved from subsequent analysis, further reducing the total number of participants to 411. The breakdown of participants by various forums were as follows: social media (n = 178), MTurk (n = 161), and affinity groups (n = 72).

Participants average age was 36.25 (*SD* = 10.35), 55.0% identified their assigned sex at birth as female, 44.7% identified as male, and .3% identified as intersex (see Table 5). The majority of participants reported their gender identity as woman or female (54.4%) others identified as man or male (44.1%), genderqueer (.3%), gender fluid (.6%), non-binary (.3%), or as another identity (.3%). Participants described their sexual orientation as straight/heterosexual (87.5%), bisexual (6.8%), gay (3.1%), lesbian (.6%), pansexual (1.1%), queer (.6%), or another orientation (.3%). People self-identified their ethnicity as: Chinese (23.8%), Japanese (16.3%), Korean (15.6%), Filipino (10.7%), Vietnamese (9.7%), Indian (7.1%), multiple-races (6.6%) or other races accounting for < 5% (Cambodian, Hawaiian, Indonesian, Iranian, Iraqi, Israeli, Jordanian, Lebanese, Malaysian, Singaporean, and Taiwanese). Their highest level of education varied from some high school (.3%), high school graduate (3.7%), some college (8.8%), college graduate (45.5%), masters or professional degree (32.1%), to doctorate degree or higher (9.7%).

On average, participants had 12.66 years of work experience (*SD* = 9.67). Participants current employment status were as follows: full-time (90%), part-time (7.1%), unemployed (1.4%) and retired (1.4%). Participants reported their current job level, identified as an individual contributor (39.0%), senior individual contributor (18.8%), manager (30.1%), middle management (9.2%), or executive management (2.9%). Participants came from various industries, including, education and training (20.7%), business, management and administration (11.9%) information technology (11.4%), health science (7.7%). People reported their social

class as living in poverty (.9%), working class (20.5%), middle class (53.0%), upper-middle class (24.8%), or upper class (.9%). Household incomes varied among participants, making less than $25k (4.0%), between $25k-$35k (8.0%), $35k-$50k (12.3%), $50k-$75k (20.2%), $75k-$100k (15.7%), $100k-$150k (18.2%), greater than $150k (21.7%).

Participants varied in generation status, with 16.8% identifying as 1st generation (born outside the US), 23.9% as 1.5 generation (born outside of US, came to US at the age of 17 or younger), and 43.8%, 11.6% and 4.0% identified as 2nd, 3rd, and 4th generation or greater, born in the US, respectively. Most reported that their primary language was English (85.5%). Those whose primary language was not English (14.5%), reported that their level of English proficiency as average (10.0%), above average (4.0%), good (24.0%), very good (62.0%). Most of the participants currently live inside the US (98.8%), while a small percentage currently live in Asia (1.2%, n = 5).

These 411 participants were randomly assigned to two groups to be used for the exploratory factor analysis or the confirmatory factor analysis. Sample 1 had 208 participants (180 completes), and sample 2 had 203 participants (171 completes). Given the best practices guidelines of 5:1 ratio (10:1 is optimal) of participants to items (Worthington & Whittaker, 2006). We were able to reach the recommended ratio of items to participants, 208 to 33 items (slightly over 5:1).

Table 5

Demographic Data by Sample

Category	All % (n = 411)	Sample 1 % (n =208)	Sample 2 % (n =203)
Work Experience	M = 12.68 *SD = 9.67*	M = 12.78 *SD = 9.38*	M = 12.53 *SD = 9.98*
Age	M = 36.25 *SD =10.35*	M = 36.39 *SD =10.01*	M = 36.11 *SD = 10.56*
Sex			
Female	55.0	52.2	57.9
Male	44.7	47.8	41.5
Intersex	0.3	0.0	0.6
Gender			
Woman or female	54.4	51.7	57.3
Man or male	44.1	47.2	40.9
Genderqueer	0.3	0.6	0.0
Gender fluid	0.6	0.6	0.6
Non-binary	0.3	0.0	0.6
Another identity	0.3	0.0	0.6
Sexual Orientation			
Straight/Heterosexual	87.5	87.8	87.1
Bisexual	6.8	7.8	5.8
Gay	3.1	2.8	3.5
Lesbian	0.6	0.6	0.6
Pansexual	1.1	1.1	1.2
Queer	0.6	0.0	1.2
Another identity	0.3	0.0	0.6

Table 5

Demographic Data by Sample (continue)

Category	All % (n = 411)	Sample 1 % (n =208)	Sample 2 % (n =203)
Ethnicity			
Chinese	23.8	27.4	20.2
Japanese	16.3	17.8	14.8
Korean	15.6	13.9	17.2
Filipino	10.7	9.1	12.3
Vietnamese	9.7	8.2	11.3
Indian	7.1	6.7	7.4
Other	6.6	5.3	7.9
Taiwanese	3.2	4.3	2.0
Hawaiian	1.7	1.4	2.0
Indonesian	1.2	1.0	1.5
Malaysian	1.0	1.0	1.0
Cambodian	0.7	1.0	0.5
Singaporean	0.7	1.0	0.5
Iranian	0.5	0.5	0.5
Jordanian	0.2	0.0	0.5
Lebanese	0.2	0.0	0.5
Iraqi	0.2	0.5	0.0
Israeli	0.2	0.5	0.0
Mongolian	0.2	0.5	0.0
Is English your primary language?	85.5 (Yes)	85.0 (Yes)	86.0 (Yes)
If English is not your primary language, how would you rate your level of English proficiency?	M = 6.38 (*SD = .96*)	M = 6.38 (*SD = .94*)	M = 6.38 (*SD = 1.01*)

Table 5

Demographic Data by Sample (continue)

Category	All % (n = 411)	Sample 1 % (n =208)	Sample 2 % (n =203)
Generation Status			
1st generation (Born outside of U.S.) came to the US as an adult (18 years or older)	16.8	19.2	14.4
1.5 generation (Born outside of U.S.) came to the US as a child (17 or younger)	23.9	22.7	25.0
2nd generation (Born in U.S.)	43.8	41.9	45.6
3rd generation (Born in U.S., parents born in U.S.)	11.6	12.2	11.1
4th generation or greater (Born in U.S., grandparents/great grandparents etc. born in U.S.)	4.0	4.1	3.9
Highest Education			
Some high school (9^{th} -11^{th})	.3	0	0.6
Grade 12 or GED (High school Graduate)	3.7	3.3	4.1
College 1 year to 3 years (Some College)	8.8	4.4	13.4
College 4 years or more (College graduate)	45.5	48.3	42.4
Masters or other professional degree	32.1	35.0	29.1
Doctorate degree (MD. JD, PhD)	9.7	8.9	10.5
Household Income			
Less than $25,000	4.0	5.6	2.3
$25,000 to $34,999	8.0	5.6	10.5
$35,000 to $49,999	12.3	11.2	13.4
$50,000 to $74,999	20.2	20.7	19.8
$75,000 to $99,999	15.7	16.8	14.5
$100,000 to $149,999	18.2	17.9	18.6
$150,000 or more	21.7	22.3	20.9
Social Class			
Upper Class	.9	1.1	.6
Upper-Middle Class	24.8	24.0	25.6
Middle Class	53.0	52.0	54.1
Working Class	20.5	21.8	19.2
Living in Poverty	.9	1.1	.6

Table 5

Demographic Data by Sample (continue)

Category	All % (n = 411)	Sample 1 % (n =208)	Sample 2 % (n =203)
Industry			
Arts, Audio/Visual Technology, & Communications	6.5	6.7	6.4
Business, Management, and Administration	11.9	12.2	11.6
Education and Training	20.7	23.3	18.0
Finance	5.7	5.6	5.8
Government and Public Administration	4.8	3.3	6.4
Health Science	7.7	8.3	7.0
Human Services	4.5	5.6	3.5
Information Technology	11.4	12.8	9.9
Law, Public Safety, Corrections, and Security	1.4	1.1	1.7
Manufacturing	2.3	1.7	2.9
Marketing, Sales, and Service	7.4	7.2	7.6
Science, Technology, Engineering, and Mathematics	11.9	10.0	14.0
Transportation, Distribution, and Logistics	2.3	1.7	2.9
Job Level			
Executive Management	2.9	4.9	0.8
Middle Management	9.2	11.3	6.9
Manager	30.1	29.6	30.8
Senior Individual Contributor	18.8	18.3	19.2
Individual Contributor	39	35.9	42.3
Employment Status			
Full-time	90.0	88.2	91.9
Part-time	7.1	6.7	7.6
Unemployed	1.4	2.2	0.6
Retired	1.4	2.8	0.0
Currently lives in…			
United States	98.8	99.0	98.5
Asia	1.2	1.0	1.5

Convergent Measures

WIS. The Workplace Incivility Scale is an updated 12-item scale that assesses the frequency in which an employee experiences hostility, rudeness, or disrespectful behavior by supervisors and co-workers within the last year (Cortina et al., 2013, updated from the original WIS; Cortina et al., 2001). The responses range from "0" (*never*) to "4" (most *of the time)*. Participants responded by indicating the frequency in which the event or events happened to them. Some examples of the WIS include, "*Address you in unprofessional terms, either publicly or privately?*" and "*Doubted your judgement on a matter over which you have responsibility?*" Higher means indicated a higher frequency of incivility (α =.95, see Appendix E for full scale).

REMS. The racial and ethnic microaggression scale examines the frequency of microaggression the occurs in day-to-day life (Nadal, 2011). Example items of the Workplace and School Microaggressions of the REMS include, (*An employer or co-worker treated me differently than White co-workers.*). The responses range from "0" (*I did not experience this event in the past 12 months) "1" (I experienced this event 1 time in the past 12 month*s) to "5" (*I experienced this event 5 or more times in the past 12 month*s.) Only the workplace and school microaggression subscale was used given the context of the study. Higher means indicated a higher frequency of microaggression in the workplace (α = .92, see Appendix F for full scale).

Divergent Measures

Neuroticism. Neuroticism is a personality measure that assesses anxiety, depression, and other negative thoughts (Barrick & Mount, 1991). The neuroticism scale consists of 10-items (Goldberg 1992). Sample items include, "*Panic easily,*" "*Often feel blue,*" and "*Am often down in the dumps.*" Participants rated the extent to which each statement is accurate of themselves.

The responses range from "1" (*very inaccurate*) to "5" (*very accurate*). Higher means indicated higher levels of neuroticism. (α = .92, see Appendix G for full scale).

Social Desirability. Social desirability is the tendency for individuals to project a favorable image of themselves (Crowne & Marlowe, 1960). A shortened version of the social desirability scale was used (Reynolds, 1982). This shortened scale consists of 13 true-false items. Example items include, *"I am always courteous, even to people who are disagreeable." and* "*No matter who I'm talking to, I'm always a good listener*." Higher average scores indicated higher levels of social desirability (α =.77, see Appendix H for full scale).

Concurrent Measures

Perceived Organizational Support. Perceived organizational support is the extent to which the employee perceives that the organization values their contributions in the workplace and the extent to which the organization cares about their well-being (Eisenberger et al., 1986; Eisenberger & Stinglhamber, 2011). Perceived organizational support was measured using an 8-item measure on a 7-point scale. Responses range from "1" (*strongly disagree*) to "7" (*strongly agree*). Example items include, "*The organization values my contribution to its well-being*." "*The organization cares about my general satisfaction at work" and "The organization takes pride in my accomplishments at work."* Mean scores were computed for perceived organizational support, higher mean scores indicated higher levels of perceived organizational support, (α = .92, see Appendix J).

Organizational Commitment. Organizational commitment is the extent to which an employee identified with their respective organization and its goals (Mowday et al., 1979). This was measured by 15 items on a 7-point scale. Responses range from "1" (*strongly disagree*) to "7" (*strongly agree*). Some sample items include, "*I talk up this organization to my friends as a*

great organization to work for," "*I am proud to tell others that I am part of this organization,*" and "*I feel very little loyalty to this organization (reverse scored*)." Mean scores were computed for organizational commitment, higher means indicated higher organizational commitment (α = .90, see Appendix K).

Job Satisfaction. Job satisfaction measured the positive emotional state of employees resulting from their job or job experience (Judge & Klinger, 2008). Job satisfaction was measured using 5 items measure on a 7-point scale. Responses range from "1" (*strongly disagree*) to "7" (*strongly agree*) (Judge et al., 1998). Sample items include, "Mos*t days I am enthusiastic about my work*" "*I find real enjoyment in my work"* and "*Each day of work seems like it will never end (reverse scored)."* Mean scores were computed for job satisfaction, higher means indicated a more positive emotional state toward their work experience (α = .89, see Appendix L).

Intention to Quit. Intention to quit measured of the likelihood of employee turnover (Colarelli, 1984). Intention to quit was measured using a 3-items on a 5-point scale. Responses ranged from "1" (*strongly disagree*) to "5" (*strongly agree*). Sample items include, "*I am planning to search for a new job in the next 12 months*" *I frequently think of quitting my job*" and "*If I have my own way, I will be working for my current employer one year from now (reverse scored)*". Mean scores were computed for intention to quit, higher means indicated a higher likelihood of turning over (α = .71, see Appendix M).

Burnout. Burnout is characterized as emotionally exhausted by the emotional demands of that employee's work (Demerouti et al., 2001). Burnout was measured by 16 items on a 4-point scale. Response range from "1" (*strongly disagree*) to "4" (*strongly agree*). Some sample items included, "*During my work, I often feel emotionally drained*," "*Over time, one can become*

disconnected from this type of work" and "*After working, I have enough energy for my leisure activities (reverse scored)*." Mean scores were computed for burnout, higher means indicated higher levels of exhaustion (α = .92, see Appendix N).

Somatic Symptoms. Somatic symptoms were measured using the Patient Health Questionnaire-15 to assess the extent to which participants experienced somatic symptoms (PHQ-15, Kroenke et al., 2002). Participants responded with one of three options, "0" (*not bothered at all*), "1" (*bothered a little*), or "2" (*bothered a lot*). Participants reported to symptoms such as, "stomach pains" "dizziness" and "backaches". Mean scores were calculated for the somatic symptoms, higher means indicated higher likelihood of being disturbed by somatic symptoms (α = .89, see Appendix O).

Demographics. Participants reported demographics information such as ethnicity, gender, sexual orientation, social economic status and so forth (see Appendix P for full scale, Appendix O lists all attention check questions scattered throughout the survey).

Procedure

Participants completed a battery of measures online. This online survey was hosted by Qualtrics. All participants met the following criteria in order to be included in this study: participants were 1) at least 18 years of age or older, 2) resided within the US, 3) self-identify as Asian, and 4) had at least one year of work experience in the US. The survey took on average 25 minutes to complete. People who completed the survey through MTurk received either $2 or $6 for their time, whereas those who completed their survey on Facebook, LinkedIn or via affinity group recruitment were not compensated for their time. Initial participants (n = 63) were initially compensated $2 for 25 minutes of their time. However, because the response rates were low, the

incentive to participate was increased to $6 for 25 minutes. Data were collected from October 2019 to January 2020.

CHAPTER 4

Results

The goal of Phase 2 was to conduct a confirmatory factor analysis to determine the structure of the factors. Samuels (2016) suggests several steps in the process of conducting an exploratory factor analysis. These steps helped hone items and factors as well as give a rationale for why certain decisions were made. A step-by-step approach were used as a guide in the analysis of the exploratory factor analysis (adapted from Samuel, 2016): 1) run a bivariate correlation of all items to minimize the potential for multicollinearity; 2) decide on the appropriate extraction method and rotation to be used; 3) optimize for the number of factors; 4) remove items that do not load into factors; 5) remove items that cross loaded with other factors at .32 or greater; and 6) provide meaningful name of factor description, remove items that were conceptually not meaningful within factors, and provide additional reliability of stable solution.

Preliminary Analysis

As a preliminary analysis, a bivariate correlation was run on all 33 WRMS items to minimize multicollinearity (see Table 6 in Appendix R). Items that had a correlation of .80 or higher were considered to be multicollinear (Beavers et al., 2013), items that were highly correlated with each other were thought to be tapping into the same construct. There were seven pairs of items with correlations of .80 or higher: items 1 & 4: 2) items 2 & 3; 3) items 5 & 6, 4) items 9 & 10, 5) items 16 & 17, 6) items 17 & 18, 7) items 21 & 23, 8) items 22 & 23, 9) items 27 & 28). Fields (2013) suggests removing one of the items in the bivariate correlation in order to minimize multicollinearity. When items that were highly correlated, the context of these items were examined. If these items were too similar in context, one was removed to minimize multicollinearity. For instance, item 2 *"...imply that you were good at math because of your*

race?" was highly correlated with item 3 *"...convey that you were good with "numbers" because of your race?*" $r = .87$. Seven of these nine pairs had one item removed because items were thought to be closely related to each other with a similar context. For those pairs highly correlated, items 2, 5, 17, 21, 22, and 28 (item 17 occurred twice) were removed to minimize multicollinearity (see Table 7).

On the other hand, when items were highly correlated, but the content was different, both items were retained. This exception was made for two pairs: 1) items 1 and 4, as well as, 2) items 9 and 10. For instance, item 1, *"...assign you to projects that were related to math skills because of your race" and item 4, "...delegate you work that was math related because of your race?"* were highly correlated, $r = .84$. And item 9 *"...imply that you were submissive because of your race?*" and item 10 "*...note that you are someone who always complies because of your race?*" were highly correlated, $r = .81$. The content was different enough between these two sets of items that all four items were retained. This preliminary analysis removed 6 items, reducing the total number of items down to 27.

Table 7

Rationale for Item Deletion

Item	Reason for Removal
Multicollinearity	
Item 2 ...imply that you were good at math because of your race?	Highly correlated with item 3) ...convey that you were good with "numbers" because of your race?
Item 5 ...expect you to work harder than other co-workers because of your race?	Highly correlated with item 6) ...expect you to do more work than your other colleagues in similar positions because of your race?
Item 17 ...mistake you for another Asian person within the organization?	Highly correlated with item 16) ...mistake you for another Asian person that is a different ethnicity than yours? & item 18). ...call you by another Asian person's name?
Item 21 ...ignore your ideas in meetings?	Highly correlated with item 23) ...not take your recommendations seriously?
Item 22 ...ignore your suggestions?	Highly correlated with item 23) ...not take your recommendations seriously?
Item 28 ...provide you less recognition for similar work done by others at the same level?	Highly correlated with item 27) ...give more credit to your co-worker (non-Asian) than you, even though you both contributed equally?
Minimum Factor Loading	
Item 31 ...imply you were brought onto a committee because of your race?	Factor loading < .40
Item 15 …tell you that your English is "good" because of your race?	Factor loading < .40
Cross-loaded	
Item 25 ...tell you were quiet even though you speak as much as other people?	Cross loaded on multiple factors > .32
Item 30 ...mention your race in a conversation?	Cross loaded on multiple factors > .32
Poor Conceptual Fit	
Item 6 ...expect you to do more work than your other colleagues in similar positions because of your race?	Conceptually not meaningful in factor 2
Item 29 ...call you by a nickname that was synonymous with something Asian (e.g., ninja or tiger mom)?	Conceptually not meaningful in factor 4
Item 32 ...ask you to speak-up in meetings?	Conceptually not meaningful in factor 4
Item 33 ...question your silence?	Conceptually not meaningful in factor 4

Factor Analysis Method & Rotation

Prior to conducting the factor analysis, the exploratory factor analysis method and rotation of factors were chosen. Based on the recommendations of Worthington and Whittaker (2006), a principal axis factoring (PAF) was run to determine whether the data was suitable for factor analysis. The PAF yielded the Kaiser-Meyer-Olkin (KMO) index, which measured the sampling adequacy, and Bartlett's test of sphericity, which determined whether variables were suitable for factor analysis. Results indicated that KMO = .93 and a significant Bartlett's tests of sphericity for the WRMS-27, χ^2 (351) = 4516.10, $p < .05$. KMO values of .60 or greater and a significant Bartlett's test of sphericity are required for factor analysis (Taabachnick & Fidell, 2001). These results indicated that the data were suitable for factor analysis.

An oblique rotation was chosen because it was rationalized that salient factors would be correlated with each other. For example, if a person experienced one form of microaggression in the workplace, it was highly likely that person would also experience another type of microaggression as well. All analyses were conducted using standard statistical packages, such as SPSS and MPlus.

Phase 2: Exploratory Factor Analysis

In the exploratory factor analysis, factor retention was determined by examining multiple criteria, such as eigenvalues and a scree plot. The initial factor analysis was run on group 1, a randomly assigned group of 208 participants. An oblique rotation was utilized on the 27 WRMS items. The factor analysis produced eigenvalues and a scree plot. Both the eigenvalues and scree plot were used as guidelines to determine the number of factors in the extraction process. An examination of the eigenvalues revealed four factors that have eigenvalues above one (see Figure 2). These four factors accounted for 62.34% of the variance (see Table 8). The eigenvalues of the

four factors were as follows, 13.21, 2.17, 1.51, and 1.36. A visual analysis of the scree plot indicated there was a "break" at the 5th eigenvalue. This break indicated the area in which data began to flatten, see Figure 2 (Costello & Osborne, 2005). Both the eigenvalues and the visual analysis of the scree plot indicated that there were potentially four factors.

Additionally, a parallel analysis was conducted to determine how many factors should be retained. Parallel analysis is a statistical method used to determine the number of factors to retain in a factor analysis (Horn, 1965). A parallel analysis was run, simulating 1,000 random datasets with 27 items (Horn, 1965; Patil et al., 2017). The parallel analysis suggested a two-factor solution. Eigenvalues of the initial exploratory factor analysis and the parallel analysis were displayed in Table 8.

Depending on the analysis, there were two potential factor solutions. The initial factor analysis and scree plot suggested a four-factor solution, whereas the parallel analysis suggested a two-factor solution. After careful examination of the eigenvalues between the factor analysis and parallel analysis, the differences in the third and fourth eigenvalues were quite small (3rd eigenvalue, 1.51vs 1.61; 4th eigenvalue, 1.36 vs. 1.52). Choosing a two-factor solution would have eliminated two additional factors that were interpretable. Given the potential of losing two interpretable factors, a four-factor solution was retained. The rationale for retaining the four-factor solution was to minimize the risk of under extraction, an approach taken by previous researchers (Brewster et al., 2016; Fabrigar et al., 1999).

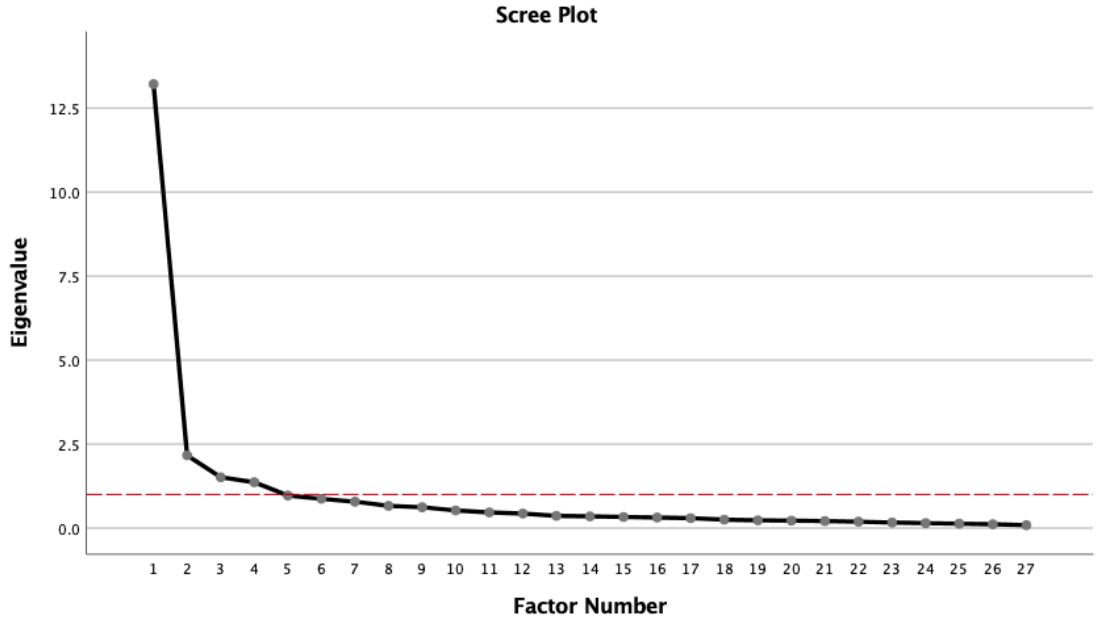
Table 8

Comparison of Eigenvalues in Exploratory vs. Parallel Analysis

Exploratory Factor Analysis Eigenvalues		Parallel Analysis Eigenvalues
13.21	>	1.84
2.17	>	1.70
1.51	<	1.61
1.36	<	1.52

Figure 2

Screen plot of Eigenvalues by Exploratory Factor Analysis of the WRMS-27



Note. Red dotted line indicates eigenvalue of 1.

Minimal Factor Loadings and Cross Loadings

To optimize the four-factor solution, items that did not meet minimal factor loadings or cross loaded highly onto multiple factors were removed (see Table 9). Items that loaded less than .40 were removed (Kim & Mueller, 1978). Retaining items with low factor loadings would produce additional error and unreliability (Churchill, 1979). Therefore, items 31 and 15 were discarded because these items loaded onto one factor at .33 and .35, respectively. Items that cross loaded highly on multiple factors were also removed. One rule of thumb for discarding items that cross loaded was .32 or higher (Costello & Osborne, 2005; Tabachnick & Fidell, 2001). For

example, items that cross loaded at .32 would have about 10% shared variance between them. This shared variance would make it unclear which factor it truly measured (Pett et al., 2003). Therefore, items that cross loaded on multiple factors at .32 or higher were discarded. Item 25 cross loaded onto two factors with loadings of .40 and .38. Item 30 cross loaded onto two factors as well with loadings of .35 and .38. Thus, items 25 and 30 were discarded. In total four items were removed because they did not meet the minimal factor loading or had high cross loadings, bringing the total number of items down to 23 (see Table 7).

Description of Factors

Factor 1 was defined as "*submissiveness and lacking communication skills,*" as this factor consisted of items that described the treating Asians as if they are meek or lacked general communication skills (see Table 9). More specifically, these communications skills were comprised of English, interpersonal, and social skills. This eight-item factor accounted for 50.14% of the total variance.

Factor 2 was defined as "*ascription of math competency*," as this factor consisted of items that tapped into the treatment of Asians as if they were competent in the realm of mathematics and that they were often assigned to such projects. This three-item factor accounted for 9.56% of the total variance. Although item 6 loaded well within this factor (.56), this item would not be conceptually meaningful. Item 6 "*...expect you to do more work than your other colleagues in similar positions because of your race?*" This item was originally written for the sub-scale of hard-working expectations. Retaining this item would not be parsimonious and might add little to no additional understanding to the larger factor (Samuels, 2016). Thus, item 6 was discarded because it did not fit in with other items that was tapping into *ascription of math competency*.

Factor 3 was defined as "*mistaken identity,*" as it described the tendency that some Asian employees were often mistaken for other Asian employees within the organization or mistakenly thought to be an ethnicity other than their own. This three-item factor accounted for 5.05% of the total variance.

Factor 4 was defined as "*not recognized,*" this factor represented the tendency of not being acknowledged when speaking, not given credit for ideas or comments, or not given equal credit for equal work or just outright being ignored by others. This five-item factor accounted for 4.24% of the total variance. Similar to factor 2, factor 4 had items that were conceptually not meaningful. Item 29 *"...call you by a nickname that was synonymous with something Asian (e.g., ninja or tiger mom)?*" This item was originally written for the sub-scale of race made salient. Though item 29 loaded well (.49), this particular item indicated that the aggressor recognized the race of the target. This recognition of race undermines the other items that tapped into lack of recognition. Therefore item 29 was discarded. Two other items loaded well within the "*not recognized*" factor. Items 32 "*...ask you to speak-up in meetings?*" and 33 *"...question your silence*?" Items 32 and 33 had factor loadings of .56 and .74, respectively. Both these items focused on the perceptions of demeaning cultural values and communications styles. Because these items recognized the communication style of Asian and Asian American employees, this recognition undermines the other five items that were tapping into the lack of recognition. Thus, items 29, 32, and 33 were discarded.

Discarding items that were conceptually not meaningful (items 6, 29, 32, 33) brought the total number of items down to 19. Table 9 breaks down the four factors and the specific items loadings and cross loadings that make up each factor.

Table 9

Principal Axis Factoring Loadings for Retained WRMS-19 Items

Item content by factor	1	2	3	4
Submissiveness and Lacking Communication Skills				
7. ...assign you to projects that did NOT require interpersonal skills because of your race?	**.62**	.22	-.05	.11
8. ...receive feedback that you lacked social skills because of your race?	**.52**	.25	-.02	.10
9. ...imply that you were submissive because of your race?	**.86**	-.21	.18	.03
10. ...note that you are someone who always complies because of your race?	**.68**	-.01	.29	-.01
11. ...label you as a follower (vs. leader) because of your race?	**.73**	-.04	.02	.22
12. ...describe you as shy because of your race?	**.77**	.03	.13	-.05
13. ...delegate you work that does NOT require writing skills because of your race?	**.54**	.26	-.17	.23
14. ...give you work that does NOT utilize your speaking skills because of your race?	**.75**	.13	-.15	.01
Ascription of Math Competency				
1. ...assign you to projects that were related to math skills because of your race?	.04	**.81**	.03	.00
3. ...convey that you were good with "numbers" because of your race?	.15	**.64**	.23	-.06
4. ...delegate you work that was math related because of your race?	-.05	**.98**	.05	.03
Mistaken Identity				
16. ...mistake you for another Asian person that is a different ethnicity than yours?	.12	.08	**.68**	.04
18. ...call you by another Asian person's name?	.03	.13	**.69**	.10
19. …brought up Asian cultural events or experiences in order relate to you, but it was an ethnicity other than your own?	.04	.10	**.53**	.22
Not Recognized				
20. …look away from you, when you were speaking?	-.01	.02	-.04	**.77**
23. ...not take your recommendations seriously?	-.04	-.02	-.05	**.93**
24. ...attribute your comments to someone else?	-.02	-.01	.17	**.81**
26. ...did not provide the opportunity for you to speak up after others have shared their thoughts?	.16	-.02	.03	**.75**
27. ...give more credit to your co-worker (non-Asian) than you, even though you both contributed equally?	.10	-.02	.16	**.69**

Reliability (Sample 1)

Reliability for the 19-item WRMS and its subscales were calculated. Cronbach's alphas ranged from .82 to .93 (see Table 10). The alpha for the full WRMS-19 scale was .95. These results indicated that there was good internal consistency for all sub-scales, *submissiveness and lacking communication skills (*α = .93), *ascription of math competency* (α =.90), *mistaken identity* (α = .82), and *not recognized* (α = .92). The *submissiveness and lacking communication skills* sub-scale correlated well with *ascription of math competency* (*r* = .60), *mistaken identity* (*r* = .59), and *not recognized* sub-scale (*r* = .69). Similarly, the *ascription of math competency* subscale was moderately correlated with *mistaken identity* (*r* = .48) and *not recognized* subscale (*r* = .36). And the *mistaken identity* subscale was moderately correlated with the *not recognized* subscale. All of these intercorrelations were high enough to indicate that they were tapping into a similar construct, yet low enough that they were not overlapping on another (i.e., *r* < .70).

Table 10

Bivariate correlation, descriptive statistics, and Cronbach's alphas (Phase 2)

Variable	Mean	SD	1	2	3	4	5
1 Overall WRMS-19	.79	.74	(.95)				
2 Submissiveness & Communication Skills	.61	.79	.93**	(.93)			
3 Ascription of Math Competency	.79	.93	.69**	.60**	(.90)		
4 Mistaken Identity	1.13	.98	.76**	.59**	.48**	(.82)	
5 Not Recognized	.93	.96	.84**	.69**	.36**	.56**	(.92)

*Reliabilities are on the diagonal.

***p* < .01

Phase 3: Confirmatory Factor Analysis

The goal of phase 3 was to confirm the structure of the factors through the examination of model fit indices and provide additional reliability evidence. A confirmatory factory analysis (CFA) was run using the data from group 2, a randomly assigned group of 203 participants.

Model fit was determined through several fit indices. One of these indices was the chi-square test. The chi-square test determined the general fit of the model. A significant chi-square would be an indicator of poor model fit. However, the chi-square test has been known to be affected by larger sample sizes (Schumacker & Lomax, 2004). More specifically, chi-square tests with large sample sizes ($n > 200$) will yield a significant chi-square statistic. Because of this known issue of sample size affecting the chi-square significance, other types of indices were also considered when examining model fit (Kenny, 2015). Three different types of fit indices were examined in the CFA, these indices included absolute fit, incremental fit, and comparative fit (Kenny, 2015). Absolute fit indices presume that the best fitting model has a fit of zero, indicating perfect fit. Kenny (2015) described these indices as "badness" of fit, such that the higher the number, the worse the fit. Both, the mean square error of approximation (RMSEA) and the standard root mean residual (SRMR) are absolute fit measures. The RMSEA takes into consideration the chi-square statistic, sample size, and degrees of freedom. For the RMSEA, acceptable cutoffs of .08, .05, and .01 indicated mediocre, good, and excellent fit, respectively (MacCallum, Browne, Sugawara, 1996). For the SRMR, a value of zero indicates perfect fit, and it does not penalize model for its complexity. For SRMR, an acceptable value of .08 or less is considered a good fit (Hu & Bentler, 1999).

Incremental fit indices assume that the best fit fitting model has a value close to one. Both, the Tucker Lewis index (TLI) and Comparative Fit index (CFI) are incremental fit indices. The TLI takes into consideration the chi-square and degrees of freedom as a ratio between the null model and propose model. Whereas, the CFI takes into consideration the difference between the chi-square statistics and the degrees of freedom of the null and proposed model. The conceptual TLI and CLI formulas are shown below:

$$TLI = \frac{\chi^2/df(\text{Null Model}) - \chi^2/df(\text{Proposed Model})}{\chi^2/df(\text{Null Model}) - 1}$$

Let d = χ^2 – degrees of freedom of the model

$$CFI = \frac{d(\text{Null Model}) - d(\text{Proposed Model})}{d(\text{Null Model})}$$

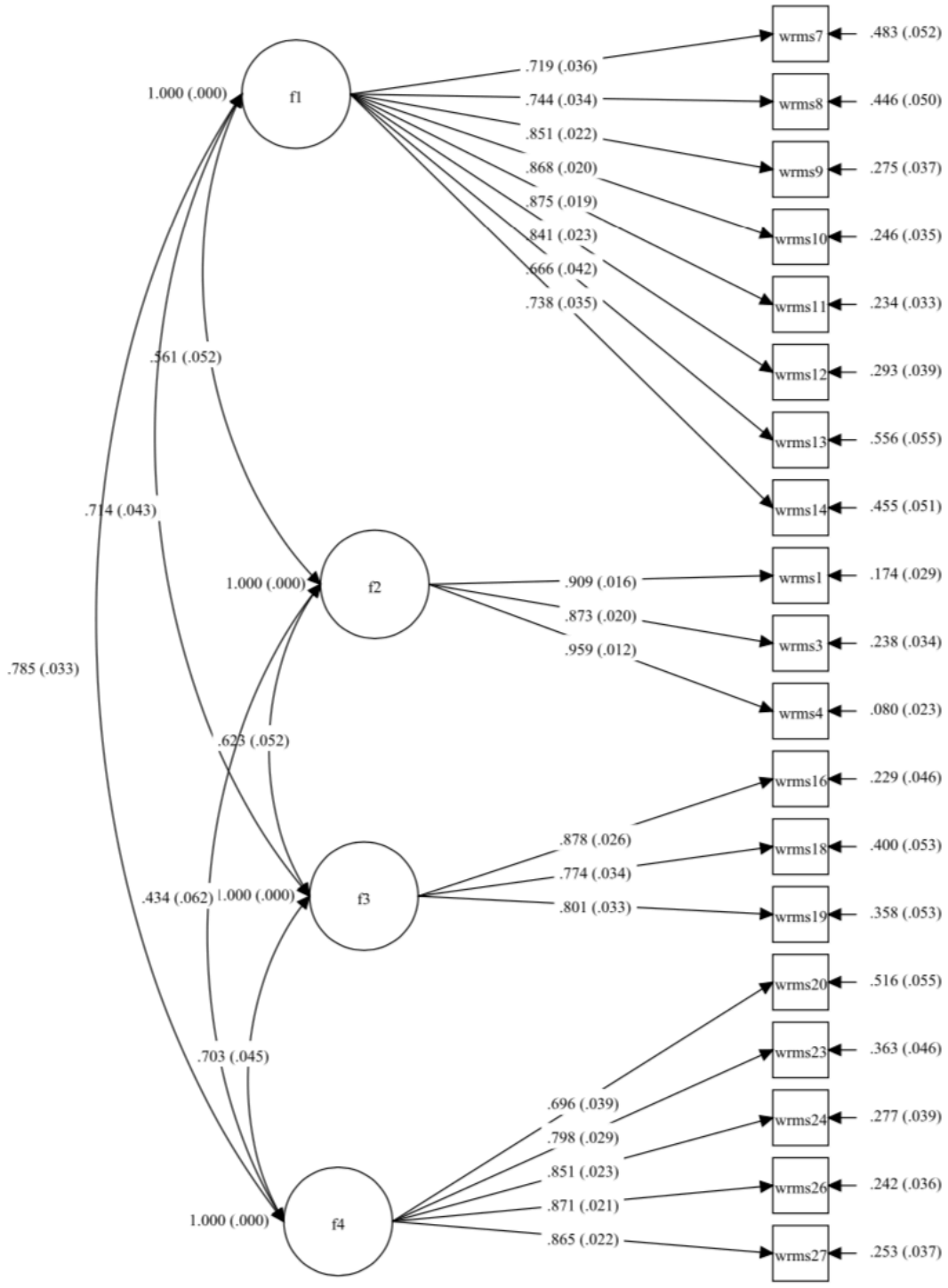
Both the TLI and CFI are indicators of good fit, where larger numbers would indicate better fit. Acceptable ranges of the TLI and CFI would be indicated by a value greater than .90 (Hu & Bentler, 1999).

Finally, comparative measures of fit were examined. Both Akaike's information criterion (AIC) and Bayesian information criterion (BIC) are considered absolute fit indices. These indices were helpful in comparing confirmatory factor analysis models with each other. However, only models that achieve adequate fit were compared. Models with lower AIC and BIC values were considered a better fit (Burnham & Anderson, 2002).

The initial confirmatory factory analysis was a four-factor model that assessed the fit of the structure found in Phase 2 (see Figure 3). Results indicated that χ^2 (146) = 404.24, $p < .01$; RMSEA = .093, 90% CI [.083, .104]; SRMR = .052; TLI = .906; CFI = .919; AIC = 8947.57, BIC = 9156.30. The chi-square was statistically significant, indicating that it was not an exact fit. However, the chi square would most likely be significant, given the known problem that the chi square statistic has with large sample sizes. The absolute fit indicators, RMSEA and SRMR, indicated mediocre and acceptable fit, respectively. Comparative fit indices, TLI and CLI, showed good fit. The standardized factor loadings ranged from .66 to .96. Overall, these results indicated that the four-factor model demonstrated good fit. As a result, no additional items were deleted.

Figure 3

Four Factor Model Diagram of WRMS-19 with loadings, residuals, and standard error.



Note. Circle = factor. Rectangles – items. Straight arrows indicate loadings. Curved arrows indicate covariance between factors. Number in parentheses are standard errors. Number pointing at items are the residuals.

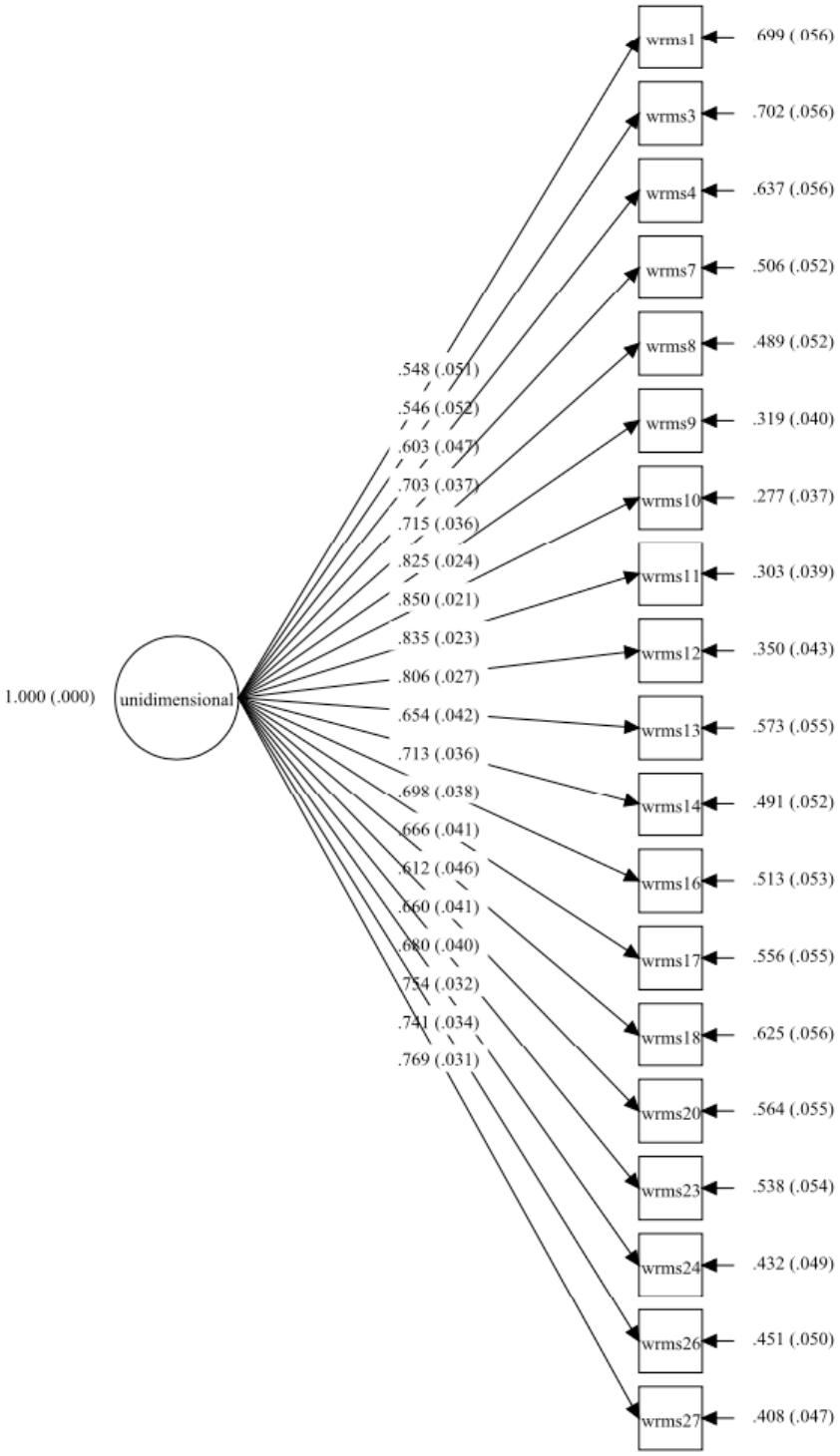
Competing Confirmatory Factor Analysis Models

While the overall results indicated that the four-factor model demonstrated good fit, the intention of these additional analysis was to determine whether there was another model that had better fit than the four-factor model. Thus, a series of confirmatory factory analyses were conducted to examine the best fitting model. CFAs based on the structure of unidimensional, second order analysis, bifactor, and a nested model were run as a supplementary analysis.

The unidimensional model assumes that all items in the CFA contributed to a unidimensional construct (see Figure 4, Hammer, 2018). For the unidimensional model, results indicated that χ^2 (152) = 1164.53, $p < .01$; RMSEA = .181, 90% CI [.172, .191]; SRMR = .097; TLI = .644; CFI = .684; AIC = 9683.86, BIC = 9884.71. These results indicated that the unidimensional model demonstrated poor fit.

Figure 4

Unidimensional Model Diagram of WRMS-19 with loadings, residuals, and standard error

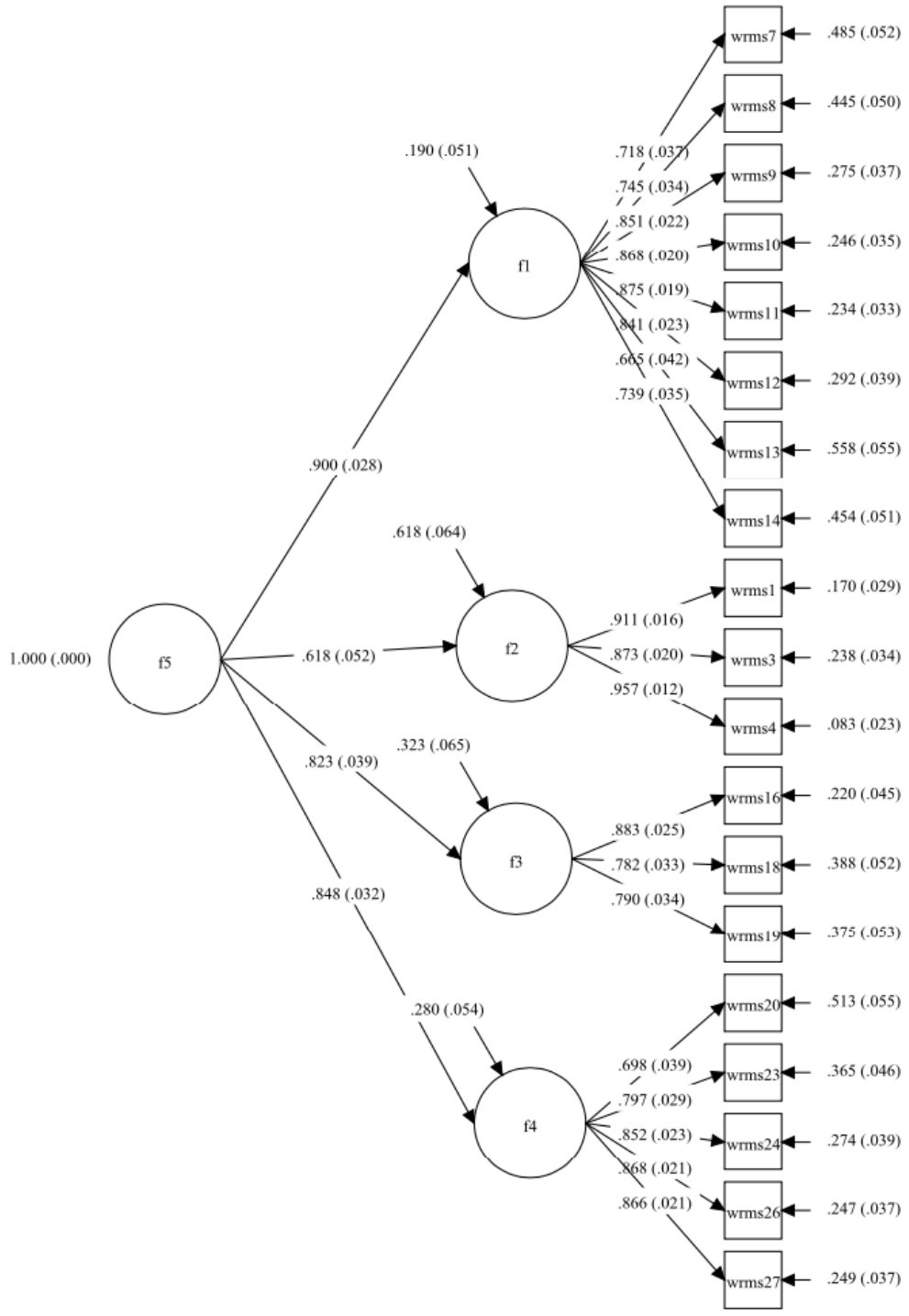


Note. Circle = factor. Rectangles – items. Straight arrows indicate loadings. Number in parentheses are standard errors.

The second order model builds off the four-factor model. This model rationalized that the reason why these four factors exists is that there is another factor of workplace microaggression that these four factors load into a higher order factor (see Figure 5). For the second order model, results indicated that χ^2 (148) = 422.37, $p < .01$; RMSEA = .096, 90% CI [.085, .106]; SRMR = .059; TLI = .901; CFI = .914; AIC = 8961.70, BIC = 9163.80. These results indicated that the second-order model demonstrated a decent fit.

Figure 5

Second Order Model Diagram of WRMS-19 with loadings, residuals, and standard error

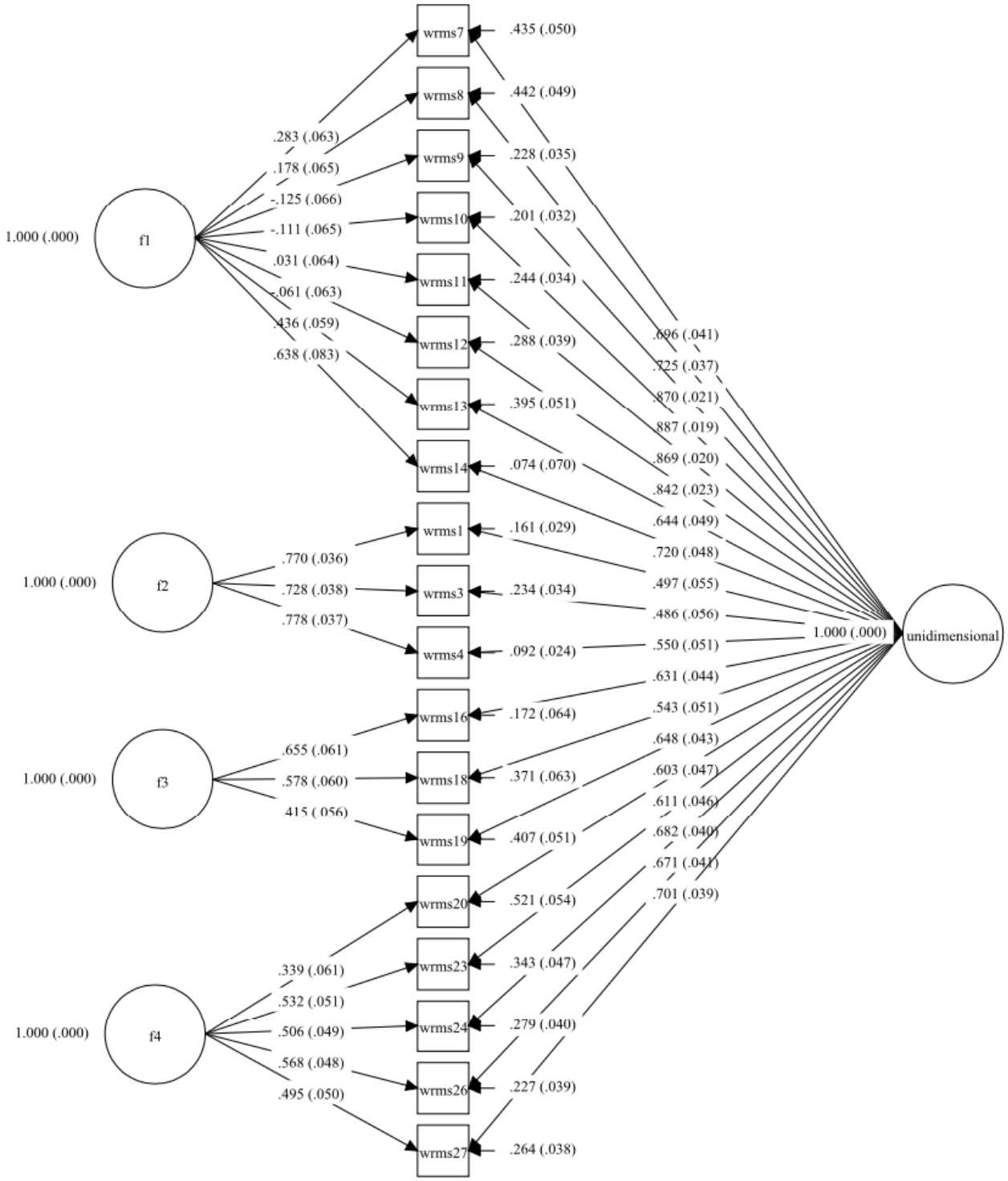


Note. Circle = factor. Rectangles – items. Straight arrows indicate loadings. Curved arrows indicate covariance between factors. Number in parentheses are standard errors. Number pointing at items are the residuals.

The bifactor model forced the 19 items into a broader general factor or a narrow specific factor. These factors compete against each other to account for variance in the 19 items. Therefore, each item loads into two different first order factors simultaneously (see Figure 6, Hammer, 2018). One difference between the bifactor model compared to the second order model is that it forces the item to choose a side. This CFA bifactor analysis may help to determine whether a total score or a sub-scale score is more suitable for a newly developed measure. For the bifactor model, results indicated that χ^2 (133) = 299.81, $p < .01$; RMSEA = .079, 90% CI [.067, .090]; SRMR = .055; TLI = .933; CFI = .948; AIC =8869.14, BIC = 9120.94. These results indicated that the bifactor model demonstrated a decent fit.

Figure 6

Bifactor Model Diagram of WRMS-19 with loadings, residuals, and standard error

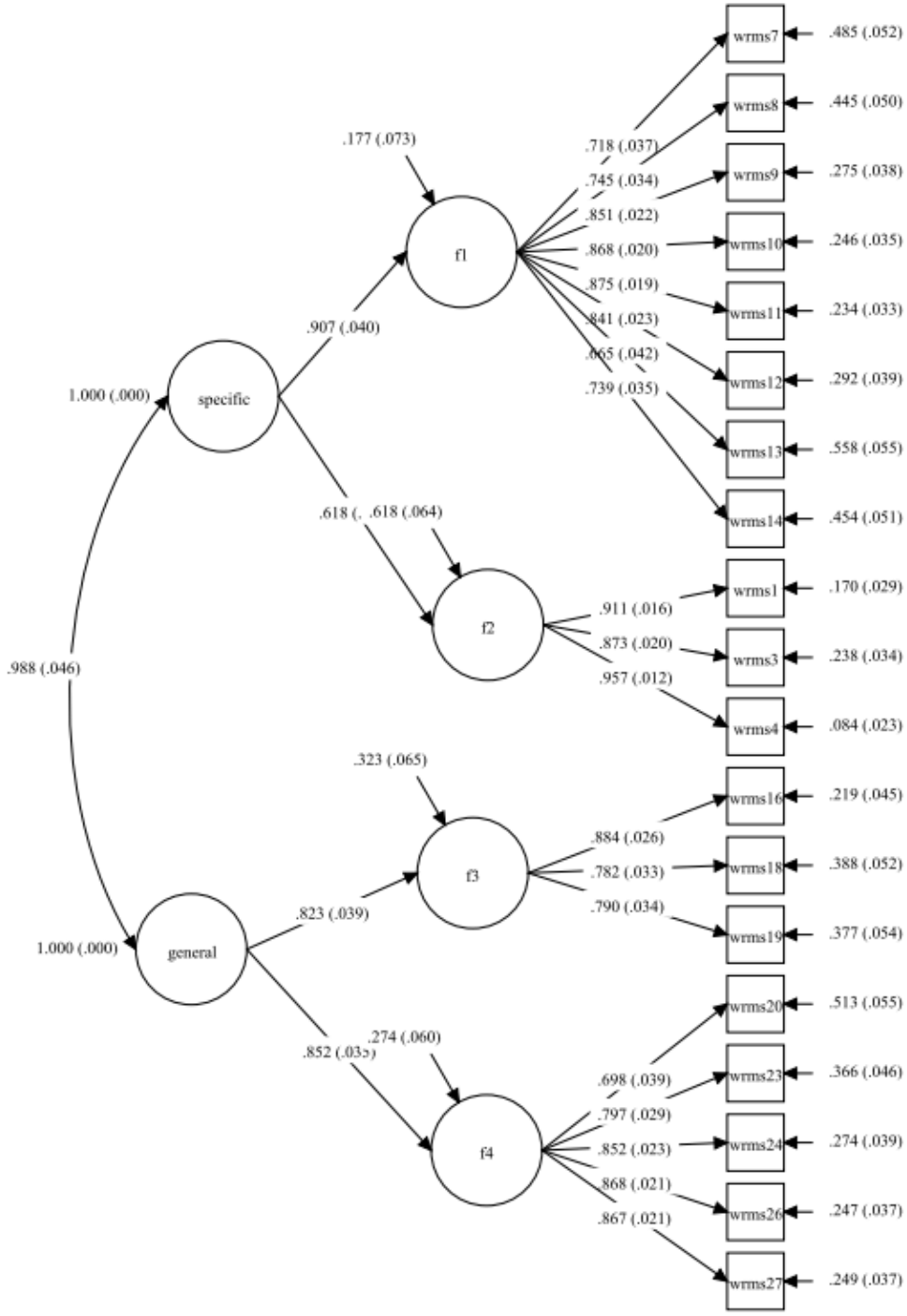


Note. Circle = factor. Rectangles – items. Straight arrows indicate loadings. Number in parentheses are standard errors. Number pointing at items are the residuals.

Finally, a nested model was examined because this study was designed based on measuring the specific and general microaggressions that Asians experienced in the workplace. These two types of microaggressions could be viewed as two second order constructs. The nested model results indicated that χ^2 (147) = 422.30, $p < .01$; RMSEA = .096, 90% CI [.085, .107]; SRMR = .059; TLI = .900; CFI = .914; AIC = 8863.63, BIC = 9169.05. These results indicated that the nested model demonstrated a decent fit.

Figure 7

Nested Model Diagram of WRMS-19 with loadings, residuals, and standard error



Note. Circle = factor. Rectangles – items. Straight arrows indicate loadings. Curved arrows indicate covariance between factors. Number in parentheses are standard errors. Number pointing at items are the residuals.

Summary. The unidimensional CFA results did not yield adequate absolute and incremental fit statistics. Thus, the AIC and BIC of the unidimensional model was not compared to the other CFA models. When comparing the four-factor model to the second order model, (ΔAIC 14.13= ΔBIC = 7.50), and the nested model, (ΔAIC = 16.06 ΔBIC = 12.75), the four-factor model had the lowest AIC and BIC of the of these three models, indicating that it was the best fit among these models (Burnham & Anderson, 2002). It should be noted that the factor loadings of items to factors are the same for these three models because the main difference between these models are the second order and third order construct thought be present in the second order and nested model, respectively.

When comparing the four-factor model and the bifactor model, the fit comparison revealed that the bifactor model was a better fit than the four-factor model, (ΔAIC = 78.43, ΔBIC = 35.36, see Table 11). While the comparative measures of fit indicated that the bifactor model was the best fit, further examination of the bifactor model loadings were inconclusive. Breaking down the bifactor loadings (see Table 12), *submissiveness and lacking communication skills* and *not recognized* items had better loadings for the total-score, while *ascription to math competency* and *mistaken identity* items loaded better as a sub-score. While the bifactor analysis forces each item to choose a side to load on, these mixed results do not clearly indicate whether total-score or sub-score ought to be used for the newly developed measure. Because of the mixed results in the factor loadings with the bifactor model, the four-factor model was interpreted as the best fitting model that made both statistical and logical sense.

Table 11

Comparison of Fit Statistics Among different CFA Models

	4 Factor Model	Unidimensional	Bifactor Model	Second Order Factor	Nested Model
χ^2(df) =	(146) = 404.24	(152) = 1164.53	(133) = 299.81	(148) = 422.37	(147) = 422.30
RMSEA	.093	.181	.079	.096	.096
90% CI	[.083,.104]	[.172,.191]	[.067, .090]	[.085, .106]	[.085, .107]
SRMR	.052	.097	.055	.059	.059
TLI	.906	.664	.933	.901	.900
CFI	.919	.684	.948	.914	.914
AIC	8947.57	9683.86	8869.14	8961.70	8963.63
BIC	9156.30	9884.71	9120.94	9163.80	9169.05

Table 12

Standardized Factor Loadings for 4-factor, Unidimensional, Bifactor, Second Order, and Nested Models

Item	Four-factor	Uni-dimensional	Bifactor WRMS Total-score	Bifactor Sub-score	Second Order	Nested
7. ...assign you to projects that did NOT require interpersonal skills because of your race?	.72	.70	.69	.28	.72	.72
8. ...receive feedback that you lacked social skills because of your race?	.75	.72	.73	.18	.75	.75
9. ...imply that you were submissive because of your race?	.85	.83	.87	-.13	.85	.85
10. ...note that you are someone who always complies because of your race?	.87	.85	.89	-.11	.87	.87
11. ...label you as a follower (vs. leader) because of your race?	.88	.84	.87	.03	.88	.88
12. ...describe you as shy because of your race?	.84	.81	.84	-.06	.84	.84
13. ...delegate you work that does NOT require writing skills because of your race?	.67	.65	.64	.44	.66	.67
14. ...give you work that does NOT utilize your speaking skills because of your race?	.74	.72	.72	.64	.74	.74
1. ...assign you to projects that were related to math skills because of your race?	.91	.56	.50	.77	.91	.91
3. ...convey that you were good with "numbers" because of your race?	.87	.56	.49	.73	.87	.87
4. ...delegate you work that was math related because of your race?	.96	.62	.55	.78	.96	.96
16. ...mistake you for another Asian person that is a different ethnicity than yours?	.88	.69	.63	.65	.88	.88
18. ...call you by another Asian person's name?	.77	.60	.54	.58	.78	.78
19. ... brought up Asian cultural events or experiences in order relate to you, but it was an ethnicity other than your own?	.80	.71	.65	.42	.79	.79
20. …look away from you, when you were speaking?	.70	.66	.60	.34	.70	.70
23. ...not take your recommendations seriously?	.80	.68	.61	.53	.80	.80
24. ...attribute your comments to someone else?	.85	.76	.68	.51	.85	.85
26. ...did not provide the opportunity for you to speak up after others have shared their thoughts?	.87	.74	.67	.57	.87	.87
27. ...give more credit to your co-worker (non-Asian) than you, even though you both contributed equally?	.86	.77	.70	.50	.87	.87

Reliability (Sample 2)

Internal consistency was also computed for the WRMS-19 and the four subscales for the second sample. The alpha for the overall WRMS-19 was .95. Cronbach's alphas for the sub-scales ranged from .86 to .94. The reliability coefficient for the following subscales were as follows: *submissiveness and lacking communication skills* (α = .93), *ascription to math competency* (α = .94*), mistaken identity* (α = .86) and *lacking recognition* (α = .92). These high reliability coefficients provided additional evidence for reliability for the new developed workplace microaggression scale for Asian and Asian Americans (WRMS-AAA, see Appendix S for final list of items).

Phase 4

Convergent Validity

The goal of phase 4 was to provide convergent and discriminant validity. DeVellis (2003) suggested that the inclusion of other validated measures was necessary to determine convergent and discriminant validity. According to Cohen (1988), correlations between.10 to .30 were considered small, .30 to .50 were considered medium and .50 and higher to be large. Thus, correlations of .50 or larger would be evidence of convergent validity (Carlson & Herdman, 2010). In phase 4, a series of correlations were run to determine the convergent and discriminant validity of the WRMS-AAA. These analyses utilized both sample 1 and sample 2 together (see Table 13). Correlations between the WRMS-AAA, the WIS (Cortina et al., 2013), and the REMS (Nadal, 2011) were run. The overall WRMS-AAA highly correlated with the WIS (*r* = .78) with a correlation range of .43 to .83 with its subscales, *submissiveness and lacking communication skills* (*r* = .70), *ascription to math competency* (*r* = .43*), mistaken identity* (*r* = .49), and *lacking recognition* (*r* = .83). The WIS highly correlated with the WRMS-AAA and its sub-scales.

Similarly, the overall WRMS-AAA highly correlated with the REMS (*r* = .59) with a correlation range of .32 to .60 with its subscales, *submissiveness and lacking communication skills* (*r* = .54), *ascription to math competency* (*r* = .32*), mistaken identity* (*r* = .40), and *lacking recognition* (*r* = .60). Results revealed that WIS and the REMS provided decent convergent validity for the combined sample. These results indicated that both the WIS and REMS were tapping into similar constructs with the WRMS-AAA. These high correlations provided support for convergent validity for the WRMS-AAA.

Discriminant Validity

Correlations between the WRMS-AAA and neuroticism (Goldberg, 1992) and social desirability (Crowne & Marlow, 1960; Reynolds, 1982) were run to examined discriminant validity (see Table 13). Given Cohen's (1988) effect sizes, a correlation with an absolute value of .50 or less would be evidence of discriminant validity – accounting for 25% or less of overlap. Results revealed that the overall WRMS-AAA was moderately correlated with the neuroticism (*r* = .35), with a range of correlations between .14 to .40 with its subscales, *submissiveness and lacking communication skills* (*r* = .32), *ascription to math competency* (*r* = .14*), mistaken identity* (*r* = .41), and *lacking recognition* (*r* = .41). These moderate correlations between the WRMS-AAA and neuroticism indicated that people who were higher in neuroticism were more likely to experience higher levels of microaggressions in the workplace.

Results revealed that the overall WRMS-AAA was moderately correlated with social desirability, (*r* = -.09), with a correlation range of -.09 to -.02 with its subscales, *submissiveness and lacking communication skills* (*r* = -.08), *ascription to math competency* (*r* = -.09*), mistaken identity* (*r* = -.08), and *lacking recognition* (*r* = -.06). These weak correlations between the

WRMS-AAA and social desirability indicated that those who were socially motivated to project a favorable image of themselves did not report higher levels of workplace microaggressions.

Phase 5

Concurrent Validity

The goal of phase 5 was to examine concurrent validity of the WRMS-AAA with other organizational outcomes (DeVellis, 2003). Small to large sized correlations would be evidence of concurrent validity with organizational outcomes. The overall WRMS-AAA was negatively correlated with organizational support, (r = -.53), with a range of correlations between -.61 to -.21 with the subscales, *submissiveness and lacking communication skills* (r = -.49), *ascription to math competency* (r = -.21*), mistaken identity* (r = -.34), and *lacking recognition* (r = -.61). These results indicated that people who reported higher level of microaggressions in the workplace also reported experiencing lower levels of organizational support.

The overall WRMS-AAA was negatively correlated with organizational commitment, (r = -.38), with a range of correlations between -.43 to -.15 with the subscales, *submissiveness and lacking communication skills* (r = -.36), *ascription to math competency* (r = -.15*), mistaken identity* (r = -.23), and *lacking recognition* (r = -.43). These results indicated that people who reported high level of microaggressions in the workplace reported lower levels of organizational commitment.

The overall WRMS-AAA was negatively correlated with job satisfaction, , (r = -.41), with a range of correlations between -.46 to -.17 with the subscales, *submissiveness and lacking communication skills* (r = -.40), *ascription to math competency* (r = -.17*), mistaken identity* (r = -.21), and *lacking recognition* (r = -.46). These results indicated that people who reported high level of microaggressions in the workplace reported experiencing lower levels of job satisfaction.

The overall WRMS-AAA was positively correlated with intention to quit, (r = .33), with a range of correlations between .08 to .42 with the subscales, *submissiveness and lacking communication skills* (r = .30), *ascription to math competency* (r = .08*), mistaken identity* (r = .20) and *lacking recognition* (r = .42). These results indicated that people who reported high level of microaggressions in the workplace reported higher level of intention to quit.

The overall WRMS-AAA was weakly correlated with burnout, (r = .10), with a range of correlations between .03 to .11 with the subscales, *submissiveness and lacking communication skills* (r = .10), *ascription to math competency* (r = .11*), mistaken identity* (r = .10), and *lacking recognition* (r = .03). Surprisingly, these results indicated little to no correlation between microaggressions in the workplace and burnout.

The overall WRMS-AAA was positively correlated with somatic symptoms, (r = .35), with a range of correlations between .18 to .41 with the subscales, *submissiveness and lacking communication skills* (r = .30), *ascription to math competency* (r = .18*), mistaken identity* (r = .25), and *lacking recognition* (r = .41). These results indicated that people who reported high level of microaggressions in the workplace reported higher levels of somatic symptoms.[4]

[4] Supplementary analyses that were conducted for this study can be found in Appendix T.

Table 13

Bivariate correlations, reliability, descriptive statistics for Sample 1 & 2 Combined

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Overall WRMS-AAA	.86	.78	*(.95)*														
2. Sub. & Comm. Skills	.71	.86	.93**	*(.93)*													
3. Math Competency	.81	.99	.69**	.57**	*(.92)*												
4. Mistaken Identity	1.17	1.01	.78**	.62**	.52**	*(.84)*											
5. Not Recognized	.96	.96	.84**	.70**	.38**	.59**	*(.91)*										
6. WIS	.71	.77	.78**	.70**	.43**	.49**	.83**	(.95)									
7. REMS	.91	1.37	.59**	.54**	.32**	.40**	.60**	.58**	*(.92)*								
8. Neuroticism	2.30	.95	.35**	.32**	.14**	.25**	.40**	.41**	.25**	*(.92)*							
9. Social Desirability	.54	.25	-.09	-.08	-.09	-.08	-.06	-.14**	-.06	-.22**	*(.77)*						
10. Org. Support	4.99	1.36	-.53**	-.49**	-.21**	-.34**	-.61**	-.63**	-.41**	-.50**	.18**	*(.92)*					
11. Org. Commitment	4.48	1.22	-.38**	-.36**	-.15**	-.23**	-.43**	-.49**	-.32**	-.49**	.20**	.72**	*(.90)*				
12. Job Satisfaction	4.99	1.43	-.41**	-.40**	-.17**	-.22**	-.46**	-.53**	-.33**	-.59**	.22**	.74**	.77**	*(.89)*			
13. Intention to Quit	3.03	1.33	.33**	.30**	.08	.20**	.42**	.47**	.30**	.47**	-.06	-.63**	-.72**	-.71**	*(.71)*		
14. Burnout	2.15	1.43	.10	.10	.11*	.10	.03	.13*	.11*	.29**	-.19**	-.26**	-.38**	-.34**	.25**	*(.92)*	
15. Somatic Symptoms	1.36	.36	.35**	.30**	.18**	.25**	.41**	.45**	.34**	.53**	-.07	-.45**	-.37**	-.44**	.36**	.52**	*(.89)*
16. Gender	--	--	-.11*	.07	.06	-.19*	-.16*	.04	.02	-.17*	-.11*	.10*	.02	.06	-.07	-.12*	*-.22**
17. Age	36.25	10.35	.05	-.05	-.08	-.10	.02	.05	.03	-.18*	.13*	-.01	.02	.03	-.07	-.06	-.10
18. Years of work exp.	12.65	9.68	-.03	-.04	-.03	-.07	.03	.06	-.01	-.18*	.06	.01	.01	.00	-.07	-.13*	-.11*
19. Employment Status	--	--	.04	.01	-.08	.04	-.12*	.08	.01	.02	.08	-.04	.00	.05	.03	.02	.09

Note: responses range WRMS-AAA 0-4, WIS 0-4, REMS 0-5, Neuroticism 1-5, Social Desirability 0-1, Org Support 1-7, Org Commitment 1-7, Job Satisfaction 1-7, Intention to Quit 1-5, Burnout 1-5, Somatic Symptoms 1-3, gender was coded 0 for female and 1 for male, age was entered continuous variable, years of work experience was entered as a continuous variable, full-time employment was entered as 1 and part-time, unemployed, and retired were entered as 2.
*p < .05. ** p < .01

CHAPTER 5

Discussion

The purpose of this study was to develop and validate a new scale that measures the microaggressions that Asians and Asian Americans experience in the workplace. A large sample was randomly divided into two sample groups. Using an EFA, the first sample revealed a four-factor solution: 1) *submissiveness and lacking communication skills,* 2) *ascription to math competency*, 3) *mistaken identity* and 4) *not recognized.* Using a CFA, the second sample confirmed the four-factor solution. Both samples showed good internal consistency for each of the four subscales and the overall scale. These two samples were combined again to examine the initial convergent, discriminant, and concurrent validity of the WRMS-AAA. Based on the four types of microaggressions identified, these findings suggest that Asians and Asian Americans in the workplace contend with both general forms of microaggressions, *mistaken identity* and *not recognized*, as well as specific forms of stereotype-based microaggressions that pertain to Asians and Asian Americans, *ascription to math competency* and *submissiveness and lacking communication skills*. By developing the WRMS-AAA, researchers can now examine the frequency of microaggressions that Asian and Asian American employees experience in the workplace as well as examine their impact on important workplace psychological outcomes.

Major Findings

Four Types of Microaggressions in the Workplace

One of the major findings of this study is that there are four types of microaggressions that Asians and Asian Americans experience in the workplace. These four factors represent the types of subtle discrimination that Asian and Asian American employees must contend with. *Submissiveness and lacking communications skills* describes treating Asians and Asian

Americans as if they are meek and lack general communication skills. This finding was similar to previous research that indicated that Asians and Asian Americans were viewed as more submissive, timid and less outspoken than Whites (Chung-Herrera & Lankau, 2005), as well as previous research that indicated that Asians and Asian Americans were perceived as lacking English skills (Tuan, 1998). Furthermore, previous studies have also shown that Asian employees have been viewed as not fitting into certain roles, such as sales or public relations, because these roles require better communication skills (Jackson et al., 1996; Lai & Babcock, 2012; Lin, et al., 2004; Sy et al., 2010). This study confirmed that Asians and Asian Americans are treated as obedient and lacking interpersonal, writing, and leadership skills. Viewing Asians and Asian Americans as meek or lacking these important skills can limit the organization's understanding of what Asian employees' actually can contribute to the workplace.

While the microaggression factor of *submissiveness and lacking communication skills* seems to be a unique and complex factor, the competencies it encompasses are similar to the facets of prototypical leadership (or lack thereof). Previous research has demonstrated that racial group membership plays a role in the perceptions of leadership potential (Block et al., 2012). Specifically, previous research has found that prototypical leaders in organization are seen as White (Rosette et al., 2008). Previous research has also demonstrated that Asians are not seen as sharing a great deal in common with successful leaders (Landau, 1995; Sy et al. 2010). Asians have been shown to be perceived as less than ideal leaders compared to Caucasians (Sy et al., 2010, study 1 & 2). In business, leaders are as seen as people who have followers (Smith & Medin, 1981), and are not submissive or docile (Chung-Herrera & Lankau, 2005). A leader is perceived to be charismatic (House, 1977; Rosette et al., 2008), able to articulate complex thought, not lacking general communication skills, such as interpersonal, writing or speaking

(Brand, 19897; Lai & Babcock, 2012; Sue & Okazami, 1990; Sue & Zane, 1985). Therefore, the microaggressions making up the factor of *submissiveness and lacking in communication skills* can thus be seen to be a combination of several different facets of successful leadership. It thus may be a proxy for lacking leadership characteristics. It is therefore not surprising that this factor accounted for so much of the variance. It may be that Asians and Asian Americans in workplaces in the United States are treated by their colleagues in a way that conveys their colleagues' low expectations regarding Asians capacity to lead.

Ascription to math competency describes the treatment of Asians and Asian Americans as if they excel at math, statistics, or data analysis. One problem that stems from ascribing a high level of math competency to Asian employees is that it may pigeonhole Asians and Asian Americans into roles that require math-related work. This restriction may limit Asians and Asian Americans' ability to progress within the organization in other roles that are not data-centric. Another problem that this type of treatment perpetuates is that it sets up Asian employees who are not competent in mathematics to fail in this realm, potentially fostering shame because they lack those skills that were projected on to them (Lee, 1994; Lee et al., 2009; Wong & Halgin, 2006). Moreover, another problem of *ascription of math competency* is that it may juxtapose the competency of Asians and Asian Americans to that of other minority groups. The perception of lack of competency in math skills of other racial groups may highlight the negative treatment of these other groups, potentially becoming a "racial wedge" that divides minority groups (Chun, 1980; Lee et al., 2009).

Mistaken identity describes the tendency for non-Asian employees to mistake one Asian employee for another Asian employee or mistakenly identify an Asian employee's ethnicity as one that is not their own. This type of treatment perpetuates the impression that Asian employees

are seen as similar to one another as opposed to as individuals. This type of microaggression is similar to the *universal experience* theme that described the treatment of African Americans as if they were a monolithic group (Holder et al., 2015). This factor also incorporates the idea that sometimes, non-Asian people mistakenly bring up cultural events or experiences in order relate to an Asian person. There is nothing wrong with bringing up cultural events or experiences. However, the microaggression occurs when these events or experiences that are brought up to relate to that person turns out to be not related to that Asian person's ethnicity. For instance, it would be a mistake to ask a Vietnamese employee about Chuseok, a Korean autumn harvest festival. Vietnamese people do celebrate an autumn festival; it is just called Tet Trung Thu, *not* Chuseok. The difference between a superficial question that may be viewed as a microaggression versus a meaningful inquiry sometimes comes down to minimizing little mistakes.

Not recognized describes the tendency for Asian employees to go unrecognized for their work or treated as though the work they produced was substandard or is even ignored by co-workers. Not being given credit for equal work is unjust. Being ignored or feeling invisible has been a common experience for Asians and Asian Americans in the workplace (Kim et al., 2015) and in everyday life (Lin, 2011; Nadal, 2011; Sue, Bucceri et al., 2007). This lack of recognition has also been experienced by African Americans in the workplace (Holder et al., 2015). Lack of recognition is problematic because some employees are not given the proper respect or credit that has been bestowed to others in the organization. This lack of recognition is problematic because while Asian employees add diversity to organizations, rending their race as visible, their contributions to organizations sometimes might be rendered invisible (Kim et al., 2018).

Validity of the WRMSA-AAA

Convergent Validity. The second major finding in this study is the validity evidence for the WRMS-AAA. As expected, the overall WRMS-AAA was highly correlated with the WIS (Cortina et al., 2013). These two scales account for about 60% of shared variance. This degree of overlap between the WRMS-AAA and WIS suggests that both scales were tapping into a similar construct, incivility or mistreatment at work, however they are still measuring distinct aspects of this construct. That is, not only was the WRMS-AAA tapping into general incivility or mistreatment in the workplace, but it was also tapping into stereotype-based microaggressions that Asians and Asian Americans experience.

Similarly, there was also a strong correlation between the WRMS-AAA and the REMS (Nadal, 2011), as expected. These two scales accounted for 35% of shared variance. This degree of overlap between the WRMS-AAA and the REMS suggests that both scales were tapping into a similar construct, microaggressions experienced by Asians and Asian Americans, however they are still measuring distinct aspects of this construct. More specifically, not only was the WRMS-AAA tapping into stereotype-based microaggressions that Asians and Asian Americans experience as an ethnic minority, but also into stereotype-based microaggressions experienced in the workplace. The correlations provided strong support for convergent validity of the WRMS-AAA.

Discriminant Validity. As for discriminant validity, there was little to no correlation between the WRMS-AAA and social desirability, as expected (Crowne- Marlowe, 1960; Reynolds, 1982), and a moderate positive correlation with neuroticism (Barrick & Mount, 1991), as expected. These findings provided further support for discriminant validity. Interestingly, neuroticism correlated slightly higher in this study in previous research which reported a positive

but low correlation with subtle discrimination (Milam et al., 2009). This study showed that neuroticism was moderately correlated with microaggressions. Because of the nature of correlations, the direction of the influence is unknown. One possible reason for this higher than expected correlation between neuroticism and racial microaggressions could be that individuals who score highly on the neuroticism scale report experiencing more anxiety and therefore might be more sensitive or aware of microaggressions in the workplace. Another reason why this correlation might be higher than expected is due to order effects of the survey. People were asked to complete the WRMS-AAA, WIS, and REMS first, all of which prompt thoughts and feelings about the experience of subtle discrimination and then complete the neuroticism scale. It could be that all of these scales on subtle discrimination primed participants to be self-report more experienced anxiety as they thought about their experiences in being a racial minority first. Thus, order effects may have led participants to report a temporary heightened level of neuroticism.

Concurrent Validity. Regarding concurrent validity, these findings showed that the overall scale and subscales correlated with a variety of organizational outcomes, as expected. More specifically, the findings revealed that participants who reported experiencing more microaggressions, also reported that they were less likely to perceive support from their organization, felt less committed to the organization, and less satisfied with their jobs. In addition, the more people experienced microaggressions, the more likely they were to think about quitting their jobs. Finally, those people who experienced more microaggressions also reported more somatic symptoms, such as backaches, headache, or trouble sleeping. There was, however, no relationship between the experience of microaggressions and burnout. Thus, organizational outcomes such as organizational support, commitment, job satisfaction, intention

to quit, and somatic symptoms provided further support for concurrent validity for the WRMS-AAA.

Contributions

This study contributed to our understanding of the experiences of Asians and Asian Americans in the workplace in several ways. Despite Asians and Asian Americans comprising a sizeable portion of the US workforce, this is one of a few studies that examined the subtle discrimination experienced by Asians and Asian Americans at work. Thus far, there are few studies that have examined experiences of Asians and Asian Americans in the workplace (Cheng & Thatchenkery, 1997; Kim et al., 2015; Landau, 1995; Leong, 1995; Leong & Gupta, 2007). The history of stereotypes tells us that Asians and Asian Americans were once viewed as a menace to society in the 1850s (Lee, 2015; Tchen & Yeats, 2014), and later on Asians and Asian Americans were viewed as the "model minority" that has "made it" (Sue & Sue, 2003). As times change, some of these perceptions may become outdated or new perceptions may manifest. This study is important in that it reveals a current perspective of how Asians and Asian Americans are treated in the workplace. This study confirmed that Asians and Asian Americans are still far from the "having made it" status. They still experience discrimination, but this type of discrimination is more elusive; it is in the form of general and stereotype-based microaggressions.

This study also contributes to the microaggression literature by taking the microaggression framework that other researchers (Sue, Bucceri et al., 2007; Sue Capodilupo et al., 2007) have developed in clinical (Cartwright et al., 2009; Constantine & Sue, 2007; Holder et al., 2015) and academic settings (Sharp-Grier, 2015; Pittman, 2012) and applying it to the workplace. Extending our understanding of the types of microaggressions that occur in the

workplace is important because people spend approximately a third of their day at work (BLS, 2017). In day-to-day life, people can choose to walk away from someone who commits a microaggression in the park or during some leisure activity. However, the workplace is different: people have to continue to work with their supervisors, co-workers, and subordinates in order to support their livelihoods (Kim et al., 2019). This study provided a better understanding of the types of general and stereotype-based microaggressions that Asians and Asian Americans have to contend with in the workplace.

Another strength of this study was it examined several different models on various indices of fit. More specifically, the four-factor model was compared to alternative models, specifically, a unidimensional model, a second order model, a nested model, and a bifactor model. The four-factor model had better comparative fit indices compared to the unidimensional model. The four-factor model was compared to two other models, the second order model and the nested model. This comparison showed that the four-factor model had better comparative fit indices than both the second order model and the nested model. Additionally, the four-factor model was also compared to a bifactor model. While the bifactor model showed better comparative fit statistics, the factor loadings of the bifactor model were mixed, given that some factors loaded better on to a total-score, whereas others loaded better on the sub-score. The model comparison results supported the notion that the four-factor model had better comparative fit indices than the unidimensional, second order, and nested models, as well, as clearer interpretable results compared to the bifactor model.

There are similarities and differences between the microaggressions that Asians and Asian Americans experience in the workplace and the types of microaggressions Asians and Asian Americans experience in daily life. (Sue Bucerri et al., 2007). Two types of

microaggressions that were identified in this study were specific to Asian employees based on stereotypes held about Asians and Asian Americans. *Submissiveness and lacking communications skills* embodied the idea that Asians and Asian Americans were viewed as docile and lacking a variety of skills, such as writing, speaking, and leadership. This factor is unique to the experience of Asians and Asian Americans in the workplace as there was not a similar theme found in previous work that identified the types of microaggressions Asians and Asian Americans experience in daily life (Sue Bucerri et al., 2007). *Ascription to math competency* was a type of microaggression that Asians and Asian Americans experienced in the workplace, defined as the tendency for Asian employees to be treated as excelling in areas related to math. Sue Bucerri et al. (2007) also found a similar theme in their examination of the types of microaggressions Asians and Asian Americans experience in daily life, *ascription of intelligence*. Both *ascription of math competency* and intelligence are forms of overvalidation, a treatment of Asians and Asian Americans that is seemly positive based on stereotypes of Asians and Asian Americans (Kim et al., 2018). While both are ascribing a level of competency to Asians and Asian Americans, the theme of attributing math competence is quite different from the theme of attributing intelligence in terms of consequences. Ascription to math competency focuses on projections of mathematical proficiencies rather than general intelligence. Thus, projections of math competency may lead to being pigeonholed into certain jobs, whereas ascription of intelligence may convey that Asians and Asian Americans are smart, elevating their status in day-to-day life.

The other two general microaggressions themes found in this study could apply to many other minority groups. *Mistaken identity* was the tendency for non-Asian employees to mistake one Asian employee for another Asian employee. This factor was similar to the *invalidation of*

interethnic difference theme which described Asians and Asian Americans as people who are all alike (Sue, Bucerri et al., 2007). *Not recognized* was defined as the tendency for Asian employees to go unrecognized or ignored. This factor was similar to the *invisibility* theme which describes that the process of being overlooked (Sue, Bucerri et al., 2007).

This study also contributes to the workplace incivility literature (Schilpzand et al., 2012) by examining the specific types of incivility that Asians and Asian Americans experience in the workplace. While this study found some general incivilities that Asians and Asian Americans experienced, it also unearthed specific incivilities that Asians and Asian Americans experienced because of their race, a type of selective incivility (Kabat-Farr & Cortina, 2012). Not only do Asians and Asian Americans have to contend with misidentification and feeling unrecognized, as general incivilities, but they also have to contend with being ascribed a level of math competency and being treated as if they are submissive and lack general communication skills, as specific incivilities. For Asians and Asian Americans, this means navigating some of the same incivilities as everyone else, but it also means having to navigate other specific slights and snubs because of stereotypes that others hold about their racial group.

Finally, this study is one of the first known studies that has linked microaggressions to organizational outcomes. These findings regarding microaggressions and organizational outcomes confirmed what other studies on incivility has previously found. As incivility increased, employees felt less organizational support (Han et al., 2016), less organizational commitment (Lim & Teo, 2009; Smith et al., 2010; Taylor et al., 2010), lower levels of job satisfaction (Guidroz et al., 2010), higher levels of turnover intentions (Cortina et al., 2013; Han et al., 2016) and more somatic symptoms (Hershcovis et al., 2017). These findings not only support what the incivility literature has found, but it also links stereotype-based and general

microaggressions that Asians and Asian Americans experience to each of these organizational outcomes.

Practical Implications

Indeed, the WRMS-AAA could be used as an assessment tool to determine whether microaggressions are occurring in an organization. If it is determined that there is a high frequency of microaggressions within that organization or in a given work unit, diversity and inclusion coaches or consultants should be brought in to facilitate conversations and provide training on how these microaggressions may affect employees in the workplace. These conversations may validate and empower Asian and Asian American employees to unearth potential solutions to mitigate these slights or snubs. Importantly, to address this problem, organizations have to be able to measure the problem. The WRMS-AAA is one of the only known scales that measures the specific and general microaggressions that Asians and Asian Americans experience in the workplace. Once the instrument has identified microaggressions in the workplace, organizational leaders should reflect upon their own behavior and exert a concerted effect to reduce subtle forms of discrimination through small group discussions.

One practical implication of this study is that these findings could be used to inform organizational leaders about the Asian and Asian American work experience. First, leaders should be aware of the microaggressions that some of their employees may experience and whether they are condoning or perpetuating these microaggressions themselves. If organizational leaders treat Asian employees as if they are submissive, more of a follower, or lacking writing, speaking or interpersonal skills, these projections may limit some employees progress in the organization. For some employees, microaggressions may limit the ability to be promoted within or move into a position where their skillset can be best leveraged by the organization. In

addition, if leaders or supervisors falsely ascribe math competency to some Asian employees, this treatment may limit the potential skillsets of these employees because being assigned only data-centric work would lead to limited career path opportunities. Asians and Asian Americans may be pigeonholed into jobs that others think they are good fit based on the stereotypes of Asians and Asian Americans held by others (Sy et al., 2010). Receiving recognition is an essential aspect of work because it highlights the contributions of employees. Inconsistent recognition by leadership may lead employees to feel slighted, snubbed, or unimportant (Cartwright, 2009). Microaggressions that stem from not recognizing Asian employees could send a subtle message that their work or contributions are unimportant. Likewise, if an organizational leader mistakenly calls an Asian employee by another Asian's person name, this behavior could send a subtle message to Asian employees that they are not important enough for others to know who they are within the organization. This microaggression could make people feel insignificant at work. Leaders should self-reflect on their own behavior and examine the organization as a whole to identify and limit the frequency of these types of microaggressions directed toward Asian employees. Furthermore, after the reflection there should be a concerted effort reduce these microaggression through small group or team discussions.

The WRMS-AAA can be used as an assessment and provide a starting point for having tough conversations about subtle discrimination in the workplace by pointing out exactly how Asians and Asian Americans are being treated by others. . Discussions about race and racism can be tough conversations to have in the workplace, as these conversations are riddled with intense and powerful emotions (Bell, 2003). It is essential to have a diversity and inclusion specialist within the organizational to facilitate these discussions. Sue (2013) has identified multiple characteristics that may undermine or derail a discussion on race. It is important for the

moderator to acknowledge their own biases. This disclosure may be perceived as a willingness to be vulnerable so that others may do the same. This disclosure creates a climate for others to be open within the organization as modeled by the moderator and it shows that moderator is also prone to biases. These discussion in these small groups can be tough, yet meaningful as it could make certain invisible problems, visible. The WRMS-AAA may be a useful first step at making these issues visible in an organizational context.

Porath and Pearson (2013) noted that incivility or microaggressions can be costly to the organization on many fronts. Previous studies have shown that incivility and intention to turnover is related (Cortina et al., 2013; Han et al., 2016). Likewise, the findings in this study revealed that microaggressions were linked to intention to turnover. Those Asian employees who experienced higher frequencies of microaggressions were more likely to think about quitting their job. Voluntary turnover can be costly to the organization through the following: separation costs, replacement of employee, training of new employee, and loss of productivity (Cascio & Boudreau, 2012). Separation cost consists of exit interviews, administrative tasks to off-boarding former employees, and paying out accrued vacation and sick leave. Replacement cost consist of time from incumbents to interview job candidates and making a hiring decision. Training costs include on-boarding new employees, standard formal training, and even supplementary training by job incumbents. Other additional costs may manifest in the form of low productivity of the new employee, loss of institutional knowledge, and even damage to the organization. Some have estimated the cost of replacing two million people is over $64 billion (Burns, 2012; Level Playing Field Institution, 2007), while others have estimated the cost of turnover to be anywhere from 90-200% of that employee's salary (Cascio, 2000). Regardless of the estimate, it is a sizeable cost when employees choose to quit because the organization condones microaggressive

behavior. Therefore, one way organizations can reduce the cost of turnover is to minimize the frequency of microaggressive incidents that occur in the workplace.

Another practical implication of this study is that it highlights the possible microaggressions that Asians and Asian Americans may experience in the workplace. This knowledge can help both Asians and non-Asians understand and limit the microaggressions that are occurring in the workplace. Systemic racism is a systemic problem and no individual solution can solve a systemic problem. However, for Asians and Asian Americans, it is important to know and be aware that these subtle forms of discrimination are out there in the system so they will be prepared when they encounter them and not personalize them. Likewise, it is also important to inform Whites and non-Asians about the types of microaggressions that Asians and Asian Americans experience in the workplace. This can be helpful should allies choose to intervene in the fight against system racism. Furthermore, these four types of microaggressions that Asians and Asian Americans experience in the workplace can be a focal point in trainings, honing in on the behaviors that need to be changed.

Limitation and Future Research

This study has some strengths and some limitations as well. For instance, the sample of Asians and Asian Americans in the current research had participants from a variety of ethnicities, such as Chinese, Japanese, Korean, Filipino, Vietnamese, Indian and several other ethnicities. This variety showcased the diversity of ethnicities among Asians and Asian Americans, as well as highlighted the fact that, regardless of ethnicity, these microaggressions were perceived to occur by a wide variety of Asians and Asian Americans in the workplace. Furthermore, participants had on average of over 10 years of work experience from a range of industry sectors, such as education and training, business administration, information technology, and health

science. Having an ethnically diverse Asian sample with a moderate amount of work experience from different industries enhances the external validity of this study.

One limitation of this sample is that some demographic variables may not be representative of the Asian population in the US. For instance, over 87% of participants in this study reported having a bachelor's degree or higher, whereas the national average for Asians and Asian Americans is 59% (BLS, 2014). Similarly, over 55% of participants reported a household income of $75,000 or higher, whereas the national average for Asian households is about $66,000 (BLS, 2014). These demographic variables showed that this sample has a higher rate of education and a higher income than the average Asian population in the US. Future studies should procure a sample that is more representative of the population of Asian employees. Having a more representative sample may help highlight a more accurate depiction of what slights or snubs Asians and Asian Americans might be experiencing in the workplace.

Another limitation in this study is that it only used distal outcomes, such as organizational commitment, job satisfaction, and intention to quit, rather than looking at more proximal outcomes of experiencing microaggressions. Experiencing microaggressions may cause more harm in the short term, such as rumination about the microaggression or even thoughts about whether to confront the aggressor regarding the microaggressive behavior (Kim et al., 2019). These byproducts of microaggressions could limit the work-related tasks that need to be done within the organization. Other researchers have noted that low productivity due to withdrawal behavior or "presenteeism" can be financially draining to the organization compared to absenteeism, as it may not be as discernable (Goetzel et al., 2004). Future studies should also examine the proximal outcomes as well to determine whether microaggressions contribute to low productivity or other forms of withdrawal behaviors.

Future research should also examine the coping strategies that Asians and Asian Americans can use to fend off microaggressions in the workplace. Kim et al. (2015) found some reactions to microaggressions stemmed from trying to live up to the stereotype and other reactions stemmed from trying to defy the stereotype. For example, Asians and Asian Americans that try to live up to the stereotype of *ascription of math competency*, can find themselves working longer hours than their Caucasian counterparts to become competent in a field in which they may be inept, in addition to all the other required work for the job. Asians and Asian Americans may have to put in more time and effort for the same pay when they try to live up to the *ascription of math competency*. Likewise, defying the stereotype can also be costly. Asians and Asian American may spend extra time and effort in order to not be mistaken for another Asian person. This may mean that some Asians and Asian Americans may purposely differentiate themselves in the way they dress or talk at work in order to differentiate themselves from other Asians and Asian Americans at work. Similarly, recognition of speech mannerisms and accents could also allow some Asians and Asian Americans to code-switch, regulating when, where, and around which people to use non-English colloquial language. Asians and Asian Americans may regulate what they say at work in order to avoid being mistakenly identified as another Asian person. These behaviors that Asians and Asian Americans engage in so that their identity is not mistaken add into the complexity of navigating the workplace and goes beyond the work that is required for the job. While these two reactions of either trying to live up to the stereotype or defy the stereotype in response to a microaggression are not comprehensive. There are likely a number of possible strategies that Asians and Asian Americans must enact at work to cope with racial microaggressions. Future studies should examine other coping strategies beyond living up to and defying the stereotypes as a way to respond to racial microaggressions.

Validity is a process, not an end goal. While this study examined the concurrent validity of the microaggressions with organizational outcomes, understanding predictive validity is just as important. Future studies should continue to examine the effects of microaggressions in the workplace through a predictive study to examine the long-term effects of microaggressions on employees.

Conclusion

Mistreatment of any employee in the workplace is not acceptable. This study revealed that Asians and Asian Americans still experience subtle discrimination through microaggressions. These experiences negatively influence attitudes toward their jobs and the organizations that they work for. While Asians were once viewed as the "yellow peril," nowadays, Asians and Asian Americans face a different form of discrimination, and it is subtle. This study revealed four different aspects of subtle forms of discrimination that Asians and Asian Americans might experience in the workplace. As the Asian population continues to grow in the US, it is essential to continue to ascertain the inequities that Asians and Asian Americans are subjected to and unearth solutions. These solutions need to be implemented, to make the workplace a fairer and more equitable environment for all employees. Unlike explicit forms of racism, microaggressions can be elusive. However, this new scale can help measure the subtle forms of discrimination that Asians and Asian Americans experience in the workplace. Having a better understanding of what undermines Asian employees could help reduce low productivity and potentially allow employees to bring their best selves to work.

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APPENDIX A

Phase 1: SME Recruiting Script

Dear [Dr. first and name of SME],

My name is Duoc Nguyen, and I am a doctoral candidate at Teachers College, Columbia University. I am working with Dr. Caryn Block on developing a scale of microaggressions that Asians and Asian Americans experience in the workplace. You were chosen as subject matter expert because of you have conducted and published research in microaggressions, subtle forms of discrimination or other similar domains. The goal of this study is to assess relevancy, clarity, and general feedback on items for the workplace racial microaggression scale for Asians (WRMS-A). This survey should take you about 20 minutes to complete. Your answers are confidential. Reponses will be utilized to retain, modify, or remove items.

Please see link below to participate [insert link here]

If you have any inquiries, please do not hesitate to contact me at dvn2104@tc.columbia.edu. Your participation in the study is valuable in advancing the understanding of general and specific forms of microaggressions experienced by Asians in the workplace.

Thank you,
Duoc Nguyen

APPENDIX B

Phase 1: Workplace Racial Microaggression Scale for Asians Item Development (WRMS-44)

Directions for Subject Matter Experts (SME): Items were generated based on the domain of microaggressions that Asians may experience in the workplace. There are ten domains of microaggressions that items were written to capture. Each domain is defined below and followed by the specific items.

Ascription of Math Competency – the tendency for Asian employees to be treated as excelling in areas related to math, statistics, or data analyses	**Relevance** 1 = not relevant at all 2 = somewhat relevant 3 = quite relevant 4 = highly relevant	**Clarity** 1 = not clear at all 2 = somewhat clear 3 = quite clear 4 = very clear	**General feedback**
Thinking about your experience in the WORKPLACE within the PAST YEAR, how frequently did your supervisor, co-worker, client, or subordinate…			
1. ...assign you projects that were related to quantitative skills because of your race?			
2. ...compliment you on your "number crunching" skills because of your race?			
3. ...imply that you were good at math because of your race?			
4. ...convey that you were good with "numbers" because of your race?			
5. ...delegate you work that was math related because of your race?			

Hard working expectations – the tendency for Asian employees to be treated as hard workers	**Relevance** 1 = not relevant at all 2 = somewhat relevant 3 = quite relevant 4 = highly relevant	**Clarity** 1 = not clear at all 2 = somewhat clear 3 = quite clear 4 = very clear	**General feedback**
Thinking about your experience in the WORKPLACE within the PAST YEAR, how frequently did your supervisor, co-worker, client, or subordinate…			
6. ...expect you to work harder than other co-workers because of your race?			
7. ...want you to work longer hours than employees in the same position as you because of your race?			
8. ...require you to do more work than your other colleagues in similar positions because of your race?			
9. ...hinted that you would stay late at work because of your race?			
10. ...anticipated that you ought to be diligent because of your race?			

Lacking interpersonal skills – the tendency for Asian employees to be treated as if they lacked interpersonal skills	**Relevance** 1 = not relevant at all 2 = somewhat relevant 3 = quite relevant 4 = highly relevant	**Clarity** 1 = not clear at all 2 = somewhat clear 3 = quite clear 4 = very clear	**General feedback**
Thinking about your experience in the WORKPLACE within the PAST YEAR, how frequently did your supervisor, co-worker, client, or subordinate…			
11. ...assign you to projects that did NOT require interpersonal abilities because of your race?			
12. ...assign you work that did NOT require interactions with others because of your race?			
13. ...receive feedback that you lacked social skills because of your race?			

Submissiveness/Subservience –the tendency for Asian employees to be treated as submissive, passive, or docile	**Relevance** 1 = not relevant at all 2 = somewhat relevant 3 = quite relevant 4 = highly relevant	**Clarity** 1 = not clear at all 2 = somewhat clear 3 = quite clear 4 = very clear	**General feedback**
Thinking about your experience in the WORKPLACE within the PAST YEAR, how frequently did your supervisor, co-worker, client, or subordinate…			
14. ...receive feedback that you were too passive because of your race?			
15. ...imply that you were submissive because of your race?			
16. ...note that you are someone who always complies because of your race?			
17. ...label you as a follower because of your race?			
18. ...describe you as shy because of your race?			

Lacking English skills –the tendency for Asian employees to be treated as if they lacked in English skills	**Relevance** 1 = not relevant at all 2 = somewhat relevant 3 = quite relevant 4 = highly relevant	**Clarity** 1 = not clear at all 2 = somewhat clear 3 = quite clear 4 = very clear	**General feedback**
Thinking about your experience in the WORKPLACE within the PAST YEAR, how frequently did your supervisor, co-worker, client, or subordinate…			
19. ...delegate you work that does NOT require writing skills because of your race?			
20. ...give you work that does NOT utilize your speaking skills because of your race?			
21. ...assign you work that does NOT require you to write because of your race?			
22. ...tell you that your English is "good" because of your race?			

Mistaken Identity –the tendency for non-Asian employees to mistake one Asian employee for another Asian employee or as having a different Asian ethnicity other than their actual ethnicity	**Relevance** 1 = not relevant at all 2 = somewhat relevant 3 = quite relevant 4 = highly relevant	**Clarity** 1 = not clear at all 2 = somewhat clear 3 = quite clear 4 = very clear	**General feedback**
Thinking about your experience in the WORKPLACE within the PAST YEAR, how frequently did your supervisor, co-worker, client, or subordinate…			
23. ...mistake you for another Asians that is a different ethnicity than yours?			
24. ...mistake you for another Asian person within the organization?			
25. ...call you by another Asian person's name?			
26. …brought up Asian cultural events or experiences in order relate to you, but it was the wrong ethnicity.			

Ignored –the tendency for Asian employees to be ignored or overlooked	**Relevance** 1 = not relevant at all 2 = somewhat relevant 3 = quite relevant 4 = highly relevant	**Clarity** 1 = not clear at all 2 = somewhat clear 3 = quite clear 4 = very clear	**General feedback**
Thinking about your experience in the WORKPLACE within the PAST YEAR, how frequently did your supervisor, co-worker, client, or subordinate…			
27. …look away from you, when you were speaking?			
28. ...avoid eye contact with you while you were talking?			
29. ...ignore your ideas in meetings?			
30. ...ignore your suggestions?			
31. ...not take your recommendations seriously?			
32. ...attribute your comments to someone else?			
33. ...tell you were quiet even though you speak as much as other people?			
34. ...did not provide the opportunity for you to speak up after others have shared their thoughts?			

Lack of recognition – describes the tendency for Asian employees to go unrecognized for their work or treated as though the work they produced was substandard	**Relevance** 1 = not relevant at all 2 = somewhat relevant 3 = quite relevant 4 = highly relevant	**Clarity** 1 = not clear at all 2 = somewhat clear 3 = quite clear 4 = very clear	**General feedback**
Thinking about your experience in the WORKPLACE within the PAST YEAR, how frequently did your supervisor, co-worker, client, or subordinate…			
35. ...give more credit to your co-worker than you, even though the work was evenly distributed?			
36. ...give you feedback that your work was substandard?			
37. ...provide you less recognition for similar work done by others at the same level?			

Race made salient – describes the tendency for Asian employees to be singled out because of their race	**Relevance** 1 = not relevant at all 2 = somewhat relevant 3 = quite relevant 4 = highly relevant	**Clarity** 1 = not clear at all 2 = somewhat clear 3 = quite clear 4 = very clear	**General feedback**
Thinking about your experience in the WORKPLACE within the PAST YEAR, how frequently did your supervisor, co-worker, client, or subordinate…			
38. ...call you by a nickname that was synonymous with something Asian (e.g., ninja or tiger mom)?			
39. ...mention your race in a conversation?			
40. ...imply you were brought onto a committee because of your race?			
41. ...make a comment that implied that all Asians look alike?			

Demeaning Cultural Values & Communication Styles – describes the tendency for Asian employees to be treated as if their cultural values and communication styles were less desirable or that the dominant culture was superior	**Relevance** 1 = not relevant at all 2 = somewhat relevant 3 = quite relevant 4 = highly relevant	**Clarity** 1 = not clear at all 2 = somewhat clear 3 = quite clear 4 = very clear	**General feedback**
Thinking about your experience in the WORKPLACE within the PAST YEAR, how frequently did your supervisor, co-worker, client, or subordinate…			
42. ...ask you to speak-up in meetings?			
43. ...question your silence?			
44. ...display frustration at you for using an indirect way to resolve conflicts?			

APPENDIX C

Phase 1: Demographic Questionnaire (Subject Matter Experts)

What is your age? ____

What terms do you use to describe your gender identity?

1. Woman or female
2. Man or male
3. Trans woman
4. Trans man
5. Genderqueer
6. Agender
7. Gender fluid
8. Intersex
9. Non-binary
10. Another identity _____

Race: What is your race/ethnicity?

1. African/African American/Black
2. American Indian/Native American
3. Arab American/Middle Eastern
4. Asian/Asian American
5. Caucasian/European American/White
6. Hispanic/Latina/o American
7. Pacific Islander/Pacific Islander American
8. Biracial/Multiracial
9. Race/ethnicity not listed
10. Please type in your gender identity: _____

How many years of research experience in your field?
____ Years

APPENDIX D

Phase 2: Participant Recruiting Email Script (Affinity Groups)

Dear Participant,

My name is Duoc Nguyen, and I am a graduate student at Teachers College, Columbia University. I am working with Dr. Caryn Block to survey the social attitudes of Asian and Asian American employees. We are reaching out to Asian and Asian American groups within the US to examine the attitudes from their perspective. You are eligible to participate in this study, if you 1) self-identify as Asian or Asian American 2) be 18 years of age or older, and 3) have at least 1 year of professional work experience.

The survey should take about 25 minutes to complete. Completion of the survey is entirely voluntary, and results are anonymous. Responses will be aggerated and viewed at the group level and will not attributable to any one individual. You will not be asked to provide any identifying information in the survey.

Please see link below to participate [insert link here]

If you have any inquiries, please do not hesitate to contact me at dvn2104@tc.columbia.edu. Your participation in the study is valuable in advancing the understanding of social attitudes towards Asians and Asian Americans in the workplace.

Thank you,
Duoc Nguyen

Phase 2: Social Media Recruiting script

Are you 18 years or older? Do you identify as Asian or Asian-American living in the United States and have maintained a job for more than one year? If so, you may qualify to participate in an online study about a workplace study exploring Asian and Asian American experiences. If you would like to participate please follow the link below to participate in an anonymous 25-minute survey.

[insert link here]

Thanks,

Image to be used as part of social media recruiting script

Phase 2: MTURK Recruiting Script

Dear Participant,

My name is Duoc Nguyen, and I am a graduate student at Teachers College, Columbia University. I am working with Dr. Caryn Block to survey the social attitudes of Asian and Asian American employees. We are reaching out to Asian and Asian American groups within the US to examine the attitudes from their perspective. You are eligible to participate in this study, if you 1) self-identify as Asian or Asian American 2) be 18 years of age or older, and 3) have at least 1 year of professional work experience.

The survey should take about 20 minutes to complete. Completion of the survey is entirely voluntary, and results are anonymous. Responses will be aggerated and viewed at the group level and will not attributable to any one individual. You will not be asked to provide any identifying information in the survey.

Please see link below to participate [insert link here]

If you have any inquiries, please do not hesitate to contact me at dvn2104@tc.columbia.edu. Your participation in the study is valuable in advancing the understanding of social attitudes towards Asians and Asian Americans in the workplace.

Thank you,
Duoc Nguyen

APPENDIX E

Workplace Racial Microaggression Scale for Asians Items (WRMS-33)

Directions for Participants: Please rate the following statements on a frequency scale of 0 (never) to 4 (most of the time). Thinking about your experience in the WORKPLACE within the PAST YEAR, how frequently did your supervisor, co-worker, client, or subordinate…

- 0 = Never
- 1 = Rarely
- 2 = Sometimes
- 3 = Usually
- 4 = Most of the time

1. ...assign you to projects that were related to math skills because of your race?
2. ...imply that you were good at math because of your race?
3. ...convey that you were good with "numbers" because of your race?
4. ...delegate you work that was math related because of your race?
5. ...expect you to work harder than other co-workers because of your race?
6. ...expect you to do more work than your other colleagues in similar positions because of your race?
7. ...assign you to projects that did NOT require interpersonal skills because of your race?
8. ...receive feedback that you lacked social skills because of your race?
9. ...imply that you were submissive because of your race?
10. ...note that you are someone who always complies because of your race?
11. ...label you as a follower (vs. leader) because of your race?
12. ...describe you as shy because of your race?
13. ...delegate you work that does NOT require writing skills because of your race?
14. ...give you work that does NOT utilize your speaking skills because of your race?
15. ...tell you that your English is "good" because of your race?
16. ...mistake you for another Asian person that is a different ethnicity than yours?
17. ...mistake you for another Asian person within the organization?
18. ...call you by another Asian person's name?
19. …brought up Asian cultural events or experiences in order relate to you, but it was an ethnicity other than your own?
20. …look away from you, when you were speaking?
21. ...ignore your ideas in meetings?
22. ...ignore your suggestions?
23. ...not take your recommendations seriously?
24. ...attribute your comments to someone else?
25. ...tell you were quiet even though you speak as much as other people?
26. ...did not provide the opportunity for you to speak up after others have shared their thoughts?
27. ...give more credit to your co-worker (non-Asian) than you, even though you both contributed equally?
28. ...provide you less recognition for similar work done by others at the same level?
29. ...call you by a nickname that was synonymous with something Asian (e.g., ninja or tiger mom)?
30. ...mention your race in a conversation?
31. ...imply you were brought onto a committee because of your race?
32. ...ask you to speak-up in meetings?
33. ...question your silence?

APPENDIX F

Workplace Incivility Scale
(WIS; Cortina et al., 2013)

Directions: During the PAST YEAR, were you ever in a situation in which any of your supervisors or co-workers...

Responses range from “0” (never) to “4” (most of the time)

1. Paid little attention to your statements or showed little interest in your opinions.
2. Doubted your judgment on a matter over which you had responsibility.
3. Gave you hostile looks, stares, or sneers.
4. Addressed you in unprofessional terms, either publicly or privately.
5. Interrupted or “spoke over” you.
6. Rated you lower than you deserved on an evaluation.
7. Yelled, shouted, or swore at you.
8. Made insulting or disrespectful remarks about you.
9. Ignored you or failed to speak to you (e.g., gave you “the silent treatment”).
10. Accused you of incompetence.
11. Targeted you with anger outbursts or “temper tantrums.”
12. Made jokes at your expense.

APPENDIX G

Racial and Ethnic Microaggressions Scale
(Nadal, 2011)

Directions: Please indicate how frequently these events happened to you in the past 12 months.

Frequency

- 0 = I did not experience this event in the past 12 months
- 1 = I experienced this event 1 time in the past 12 months,
- 2 = I experienced this event 2 times in the past 12 months,
- 3 = I experienced this event 3 times in the past 12 months,
- 4 = I experienced this event 4 times in the past 12 months, and
- 5 = I experienced this event 5 or more times in the past 12 months.

Workplace and School Microaggressions;

1. An employer or co-worker was unfriendly or unwelcoming toward me because of my race.
2. My opinion was overlooked in a group discussion because of my race
3. I was ignored at school or at work because of my race.
4. Someone assumed that my work would be inferior to people of other racial groups.
5. An employer or co-worker treated me differently than White co-workers.

APPENDIX H

Neuroticism
(Goldberg, 1992)

Directions: Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence. Indicate for each statement whether it is

- 1 = Very Inaccurate,
- 2 = Moderately Inaccurate,
- 3 = Neither Accurate Nor Inaccurate,
- 4 = Moderately Accurate, or
- 5 = Very Accurate as a description of you.

1. Often feel blue.
2. Dislike myself.
3. Am often down in the dumps.
4. Have frequent mood swings.
5. Panic easily.
6. Rarely get irritated. (r)
7. Seldom feel blue. (r)
8. Feel comfortable with myself. (r)
9. Am not easily bothered by things. (r)
10. Am very pleased with myself. (r)

APPENDIX I

Social Desirability Scale – Form C
(Crowne & Marlow, 1960; Reynolds, 1982)

Directions: Read each item and decide whether it is true (T) or false (F) for you. Try to work rapidly and answer each question by clicking on the T or the F.

1. It is sometimes hard for me to go on with my work if I am not encouraged.
2. I sometimes feel resentful when I don't get my way.
3. On a few occasions, I have given up something because I thought too little of my ability.
4. There have been times when I felt like rebelling against people in authority even though I knew they were right.
5. No matter who I'm talking to, I'm always a good listener.
6. There have been occasions when I have taken advantage of someone.
7. I'm always willing to admit it when I make a mistake.
8. I sometimes try to get even rather than forgive and forget.
9. I am always courteous, even to people who are disagreeable.
10. I have never been irked when people expressed ideas very different from my own.
11. There have been times when I was quite jealous of the good fortune of others.
12. I am sometimes irritated by people who ask favors of me.
13. I have never deliberately said something that hurt someone's feelings.

SCORING KEY FOR THE SOCIAL DESIRABILITY SCALE

Below is a summary of the answers you provided that match the answers found in the Scoring Key (not shown). Your total score is also provided. Read the text in the blue box to interpret your score. Click Reset to take the Self-Assessment again.

1. T	___	10. F	___	18. T	___	26. T	___
2. T	___	11. F	___	19. F	___	27. T	___
3. F	___	12. F	___	20. T	___	28. F	___
4. T	___	13. T	___	21. T	___	29. T	___
5. F	___	14. F	___	22. F	___	30. F	___
6. F	___	15. F	___	23. F	___	31. T	___
7. T	___	16. T	___	24. T	___	32. F	___
8. T	___	17. T	___	25. T	___	33. T	___
9. F	___						

Interpreting Your Score:

APPENDIX J

Perceived Organizational Support Scale-Short Form
(POSS-SF; Eisenberg, Huntington, & Hutchison, 1986)

Directions: Listed below pages are statements that represent possible opinions that YOU may have about working at your current workplace. Please indicate the degree of your agreement or disagreement with each statement best represents your point of view about your workplace. Please choose from the following answers:

- 1 = Strongly Disagree
- 2 = Moderately Disagree
- 3 = Slightly Disagree
- 4 = Neither Disagree nor Agree
- 5 = Slightly Agree
- 6 = Moderately Agree
- 7 = Strongly Agree

1. The organization values my contribution to its well-being.
2. The organization fails to appreciate any extra effort from me. (R)
3. The organization would ignore any complaint from me. (R)
4. The organization really cares about my well-being.
5. Even if I did the best job possible, the organization would fail to notice. (R)
6. The organization cares about my general satisfaction at work.
7. The organization shows very little concern for me. (R)
8. The organization takes pride in my accomplishments at work.

APPENDIX K

Organizational Commitment
(Mowday et al., 1979)

Directions: Listed below are a series of statements that represent possible feelings that individuals might have about the company or organization for which they work. With respect to your own feelings about the particular organization for which you are now working (company name) please indicate the degree of your agreement or disagreement with each statement by using the scale below.

- 1 = Strongly disagree
- 2 = Moderately disagree
- 3 = Slightly disagree
- 4 = Neither disagree nor agree
- 5 = Slightly agree
- 6 = Moderately agree
- 7 = Strongly agree

1. I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.
2. I talk up this organization to my friends as a great organization to work for.
3. I feel very little loyalty to this organization. (R)
4. I would accept almost any type of job assignment in order to keep working for this organization.
5. I find that my values and the organization's values are very similar.
6. I am proud to tell others that I am part of this organization.
7. I could just as well be working for a different organization as long as the type of work was similar. (R)
8. This organization really inspires the very best in me in the way of job performance.
9. It would take very little change in my present circumstances to cause me to leave this organization. (R)
10. I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.
11. There's not too much to be gained by sticking with this organization indefinitely. (R)
12. Often I find it difficult to agree with this organization's policies on important matters relating to its employees. (R)
13. I really care about the fate of this organization.
14. For me this is the best of all possible organizations for which to work.
15. Deciding to work for this organization was a definite mistake on my part. (R)

APPENDIX L

Job Satisfaction
(Judge, Locke, Durham, & Kluger, 1998)

Directions: Please rate the extent to which you agree or disagree with the following statements.

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Slightly Disagree
- 4 = Unsure
- 5 = Slightly Agree
- 6 = Agree
- 7 = Strongly Agree

1. I feel fairly well satisfied with my present job.
2. Most days I am enthusiastic about my work.
3. Each day of work seems like it will never end (r).
4. I find real enjoyment in my work.
5. I consider my job rather unpleasant (r).

APPENDIX M

Intentions to Quit
(Colarelli, 1984)

Directions: Please rate the extent to which you agree or disagree with the following statements.

- 1 = Strongly disagree
- 2 = Disagree
- 3 = Neither agree or disagree
- 4 = Agree
- 5 = Strongly agree

1. If I have my own way, I will be working for my current employer one year from now. (R)
2. I frequently think of quitting my job.
3. I am planning to search for a new job in the next 12 months.

APPENDIX N

Burnout
(Demerouti et al., 2003)

Directions: Please rate the extent to which you agree or disagree with the following statements.

- 1 = strongly disagree
- 2 = disagree
- 3 = agree
- 4 = strongly agree

1. I always find new and interesting aspects in my work. R DIS
2. There are days when I feel tired before I arrive at work. EX
3. It happens more and more often that I talk about my work in a negative way. DIS
4. After work, I tend to need more time than in the past in order to relax and feel better EX
5. I can tolerate the pressure of my work very well. R EX
6. Lately, I tend to think less at work and do my job almost mechanically. DIS
7. I find my work to be a positive challenge. R DIS
8. During my work, I often feel emotionally drained. EX
9. Over time, one can become disconnected from this type of work. DIS
10. After working, I have enough energy for my leisure activities. R EX
11. Sometimes I feel sickened by my work tasks. DIS
12. After my work, I usually feel worn out and weary. EX
13. This is the only type of work that I can imagine myself doing. R DIS
14. Usually, I can manage the amount of my work well. R EX
15. I feel more and more engaged in my work. R DIS
16. When I work, I usually feel energized. R EX

APPENDIX O

Somatic Symptoms
(adapted from Kroenke, Spitzer, & Williams, 2006)

Directions: The questions below ask about these feelings in more detail and especially how often you (the individual receiving care) have been bothered by a list of symptoms during the past 7 days. Please respond to each item by marking (or x) one box per row.

During the past 7 days, how much have you been bothered by any of the following problems?

- 1 = Not bothered at all
- 2 = Bothered a little
- 3 = Bothered a lot

1. Stomach Pain
2. Back Pain
3. Pain in your arms, legs, or joints (knees, hips, etc.)
4. Menstrual cramps or other problems with your periods (WOMEN ONLY)
5. Headaches
6. Chest Pain
7. Dizziness
8. Fainting spells
9. Feeling your heart pound or race
10. Shortness of breath
11. Pain or problems during sexual intercourse
12. Constipation, loose bowels, or diarrhea
13. Nausea, gas, or indigestion
14. Feeling tired or having low energy
15. Trouble sleeping

APPENDIX P

Demographic Questionnaire

What is your age? ____

What terms do you use to describe your gender identity?

1. Woman or female
2. Man or male
3. Trans woman
4. Trans man
5. Genderqueer
6. Agender
7. Gender fluid
8. Intersex
9. Non-binary
10. Another identity _____

What term best describes your sexual orientation?

1. Straight/Heterosexual
2. Bisexual
3. Gay
4. Lesbian
5. Pansexual
6. Queer
7. Another identity _____

What sex were you assigned at birth?

1. Male
2. Female
3. Inter sex

Race: What is your race/ethnicity?

1. African/African American/Black
2. American Indian/Native American
3. Arab American/Middle Eastern
4. Asian/Asian American
5. Caucasian/European American/White
6. Hispanic/Latina/o American
7. Pacific Islander/Pacific Islander American
8. Biracial/Multiracial
9. Race/ethnicity not listed
10. Please type in your gender identity: _____

Ethnicity: (drop down box)

1. Cambodian
2. Chinese
3. Filipino
4. Hawaiian
5. Indian
6. Indonesian
7. Iranian
8. Iraqi
9. Israeli
10. Japanese
11. Jordanian
12. Korean
13. Kuwaiti
14. Laotian
15. Lebanese
16. Malaysian
17. Mongolian
18. Saudi
19. Singaporean
20. Syrian
21. Taiwanese
22. Thai
23. Vietnamese
24. Other (please specify):

Generational Status:
Please indicate your generation Status:

1. 1st generation (Born outside of U.S.) came to the US as an adult (18 years or older)
2. 1.5 generation (Born outside of U.S.) came to the US as a child (17 or younger)
3. 2nd generation (Born in U.S.)
4. 3rd generation (Born in U.S., parents born in U.S.)
5. 4th generation or greater (Born in U.S., grandparents/great grandparents etc. born in U.S.)

_____ if you are 1st/1.5 generation (born outside of U.S.) Please specify years spent in the U.S.

What is your highest level of education?

1. Some high school (9^{th} -11^{th})
2. Grade 12 or GED (High school Graduate)
3. College 1 year to 3 years (Some College)
4. College 4 years or more (College graduate)
5. Masters or other professional degree
6. Doctorate degree (MD. JD, Phd)

What is your combined annual household income?

1. Less than $25,000
2. $25,000 to $34,999
3. $35,000 to $49,999
4. $50,000 to $74,999
5. $75,000 to $99,999
6. $100,000 to $149,999
7. $150,000 or more

How would you best characterize your social class?

1. Upper Class
2. Upper-Middle Class
3. Middle Class
4. Working Class
5. Living in Poverty

Is English your primary language?
___Yes ____ No (if No, follow-up question)

If English is not your primary language, how would you rate your level of English proficiency?

1- Very Poor
2-
3-
4- Average
5-
6-
7-Very Good

Which of the career categories below best describes your current job?

1. Agriculture, Food, and National Resources
2. Architecture and Construction
3. Arts, Audio/Visual Technology, and Communications
4. Business, Management, and Administration
5. Education and Training
6. Finance
7. Government and Public Administration
8. Health Science
9. Hospitality and Tourism

10. Human Services
11. Information Technology
12. Law, Public Safety, Corrections, and Security
13. Manufacturing
14. Marketing, Sales, and Service
15. Science, Technology, Engineering, and Mathematics
16. Transportation, Distribution, and Logistics

What is your current employment status?

1. Full-time
2. Part-time
3. Unemployed
4. Retired

How many years of full-time work experience do you have?

____ Year

APPENDIX Q

Attention Checks

Attention checks to be added to the following measures:

1. Workplace Racial Microaggression Scale for Asians Items (Participants – Appendix E)
    a. 18.a ...select "sometimes" if you are paying attention

2. Workplace Incivility Scale (Appendix F)
    a. 8.a Select "often" if you are paying attention.

3. Job satisfaction Scale (Appendix K)
    a. 2.a select “unsure” if you are paying attention

4. Burnout Scale (Appendix N)
    a. 10a. Please select “agree” if you are paying attention.

APPENDIX R

Table 6

Correlation Matrix of WRMS-33

Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	1.00																
2	.62	1.00															
3	.67	**.87***	1.00														
4	**.84***	.72	.77	1.00													
5	.55	.57	.61	.59	1.00												
6	.53	.53	.56	.56	**.91***	1.00											
7	.49	.49	.50	.55	.64	.67	1.00										
8	.50	.44	.47	.55	.54	.54	.59	1.00									
9	.32	.43	.44	.32	.59	.62	.60	.57	1.00								
10	.43	.50	.55	.46	.69	.71	.59	.61	**.81***	1.00							
11	.41	.44	.42	.44	.68	.71	.65	.61	.76	.75	1.00						
12	.43	.52	.49	.48	.65	.65	.63	.56	.72	.69	.75	1.00					
13	.46	.47	.51	.51	.57	.53	.69	.60	.54	.45	.63	.56	1.00				
14	.42	.42	.43	.41	.55	.56	.70	.57	.58	.49	.60	.56	.74	1.00			
15	.33	.42	.40	.43	.51	.46	.40	.45	.41	.49	.43	.47	.42	.42	1.00		
16	.32	.45	.44	.37	.52	.50	.41	.38	.45	.53	.43	.52	.34	.29	.53	1.00	
17	.37	.43	.44	.38	.48	.48	.42	.44	.43	.51	.42	.45	.37	.34	.47	**.80***	1.00

*Note. r = .80 or higher

Table 6

Correlation matrix of WRMS-33 continue…

Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
18	.36	.45	.43	.37	.44	.44	.41	.41	.47	.49	.40	.40	.37	.35	.42	.69	**.86***
19	.28	.47	.45	.37	.49	.46	.39	.34	.46	.49	.47	.40	.35	.33	.40	.54	.54
20	.24	.22	.25	.26	.47	.48	.41	.43	.46	.42	.54	.37	.43	.34	.30	.30	.30
21	.24	.20	.27	.20	.48	.48	.43	.39	.57	.48	.56	.42	.46	.37	.28	.36	.37
22	.22	.20	.27	.22	.50	.49	.47	.44	.55	.50	.58	.48	.48	.39	.32	.34	.32
23	.24	.20	.27	.26	.50	.51	.45	.42	.52	.49	.59	.45	.47	.36	.28	.34	.32
24	.27	.29	.32	.31	.58	.58	.49	.42	.57	.53	.63	.45	.51	.38	.32	.45	.46
25	.31	.39	.39	.35	.54	.59	.57	.49	.63	.63	.67	.64	.45	.46	.30	.46	.50
26	.30	.34	.36	.33	.55	.57	.53	.51	.63	.57	.66	.57	.56	.46	.35	.42	.40
27	.28	.33	.32	.29	.63	.63	.57	.46	.56	.51	.60	.48	.51	.48	.41	.45	.47
28	.28	.30	.31	.29	.58	.57	.46	.49	.56	.53	.59	.50	.41	.39	.36	.39	.44
29	.37	.47	.48	.45	.53	.51	.42	.42	.43	.45	.45	.44	.45	.35	.38	.47	.46
30	.29	.39	.46	.36	.48	.43	.30	.36	.45	.41	.42	.34	.42	.37	.32	.38	.37
31	.40	.37	.38	.45	.51	.48	.40	.58	.47	.46	.46	.37	.55	.45	.39	.45	.45
32	.32	.39	.35	.40	.30	.31	.32	.37	.32	.37	.43	.35	.34	.31	.30	.22	.25
33	.32	.34	.33	.36	.43	.40	.35	.42	.42	.43	.51	.41	.40	.37	.27	.30	.31

*Note. r = .80 or higher

Table 6

Correlation matrix of WRMS-33 continue…

Items	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
18	1.00															
19	.60	1.00														
20	.30	.41	1.00													
21	.42	.41	.67	1.00												
22	.36	.40	.67	**.89***	1.00											
23	.34	.39	.72	**.86***	**.89***	1.00										
24	.48	.51	.61	.75	.71	.76	1.00									
25	.48	.49	.44	.56	.59	.57	.66	1.00								
26	.43	.45	.65	.72	.74	.75	.77	.71	1.00							
27	.53	.49	.58	.71	.70	.69	.77	.60	.76	1.00						
28	.45	.45	.59	.70	.71	.70	.71	.60	.72	**.83***	1.00					
29	.54	.50	.36	.40	.43	.43	.52	.49	.47	.49	.43	1.00				
30	.39	.53	.36	.38	.36	.41	.51	.44	.46	.40	.41	.55	1.00			
31	.47	.40	.40	.34	.38	.39	.48	.40	.50	.52	.50	.48	.52	1.00		
32	.23	.29	.40	.35	.39	.39	.41	.51	.44	.35	.43	.29	.33	.38	1.00	
33	.32	.36	.49	.49	.49	.53	.55	.58	.61	.55	.52	.37	.45	.51	.68	1.00

*Note. r = .80 or higher

APPENDIX S

Final WRMS-AAA

Directions for Participants: Please rate the following statements on a frequency scale of 0 (never) to 4 (most of the time). Thinking about your experience in the WORKPLACE within the PAST YEAR, how frequently did your supervisor, co-worker, client, or subordinate…

- 0 = Never
- 1 = Rarely
- 2 = Sometimes
- 3 = Usually
- 4 = Most of the time

Submissiveness and Lacking Communications Skills

1. ...assign you to projects that did NOT require interpersonal skills because of your race?
2. ...receive feedback that you lacked social skills because of your race?
3. ...imply that you were submissive because of your race?
4. ...note that you are someone who always complies because of your race?
5. ...label you as a follower (vs. leader) because of your race?
6. ...describe you as shy because of your race?
7. ...delegate you work that does NOT require writing skills because of your race?
8. ...give you work that does NOT utilize your speaking skills because of your race?

Ascription to Math Competency

9. ...assign you to projects that were related to math skills because of your race?
10. ...convey that you were good with "numbers" because of your race?
11. ...delegate you work that was math related because of your race?

Mistaken Identity

12. ...mistake you for another Asian person that is a different ethnicity than yours?
13. ...call you by another Asian person's name?
14. …brought up Asian cultural events or experiences in order relate to you, but it was an ethnicity other than your own?

Not Recognized

15. …look away from you, when you were speaking?
16. ...not take your recommendations seriously?
17. ...attribute your comments to someone else?
18. ...did not provide the opportunity for you to speak up after others have shared their thoughts?
19. ...give more credit to your co-worker (non-Asian) than you, even though you both contributed equally?

APPENDIX T

Supplementary Analyses

ANOVAs

To get a better understanding of the relationship between demographics and the WRMS-AAA, additional analyses were conducted. Correlations were run between gender, age, years of work experience and employment work status were correlated with the entire battery of measures (see Table 13). Being female compared to male was associated with higher levels of WRMS-AAA, $r(346) = .11$, $p < .05$.

Furthermore, an ANOVA were run on the overall WRMS-AAA and the different types recruitment methods (MTurk, social media vs. affinity groups). Results revealed that there were no significant differences between the three groups, $F(2, 408) = 1.14$, $p > .05$, ns. Social media ($M = .94$, $SD = .81$, n =178), MTurk ($M = .81$, $SD = .76$, n =161), and affinity groups ($M = .78$, $SD = .73$, n =72) reported similar levels of overall WRMS-AAA.

An ANOVA was run on each of the subscales by the different types of recruitment methods. For the *submissiveness and lacking communication skills* sub-scale, results revealed no significant difference among these three groups, $F(2,408) = 1.03$, $p > .05$, ns. Social media ($M = .75$, $SD = .86$, n =161), MTurk ($M = .72$, $SD = .84$, n =178), and affinity groups ($M = .58$, $SD = .81$, n =72), reported similar levels of submissiveness and lacking communication skills.

An ANOVA was run on the *ascription of math competency* sub-scale and the different types of recruitment methods. Results revealed that there were significant differences between these three groups, $F(2,408) = 13.21$, $p < .05$, $\eta^2 = .06$. Post-hoc analyses revealed that all three groups were significantly different from each other. MTurk participants ($M = 1.03.$, $SD = 1.05$, n =161) experienced the highest level of ascriptions of math competency followed by social media

participants (M = .79, SD = .96, n =178), followed by affinity group participants (M = .33, SD = .67, n = 72).

An ANOVA was run on the *mistaken identity* sub-scale and the different types of recruitment methods. Results revealed that there were significant different between the three groups, $F(2,408) = 5.00$, $p < .05$, $\eta^2 = .02$. Post-hoc analyses indicated that social media (M = 1.33, SD = 1.01, n =178) participants experienced the highest levels of *mistaken identity* followed MTurk participants (M = .98, SD = .96, n =161), followed by affinity groups (M = 1.18, SD = 1.02, n =72). Only the means between social media and affinity groups were significantly different from each other.

An ANOVA was run on the *not recognized* sub-scale and the different types of recruitment methods. Results revealed that there were significant difference between the three groups, $F(2, 408) = 9.95$, $p < .05$, $\eta^2 = .05$. Post-hoc analyses indicated that social media (M = 1.13, SD = 1.01, n =178) and affinity groups participants(M = 1.12, SD = 1.01, n =72) perceived the highest levels of not being recognized than MTurk participants (M = .70, SD = .81, n =161). The means of social media and affinity groups participants were significantly different from MTurk participants in the *not recognized* sub-scale.

An ANOVA was run on the overall WRMS-AAA by six of the largest ethnicities within this study. Results indicated there was a significant difference in the frequency of microaggressions experience among different ethnicities, $F(5,336) = 5.23$, $p < .05$, $\eta^2 = .07$. Post-hoc analyses revealed that Indian (M = 1.36, SD = .69, n = 29) and Vietnamese participants (M = 1.29, SD = .88, n =40) perceived significantly higher frequency of overall microaggressions than Korean (M = .89, SD = .75, n = 64), Chinese (M = .82, SD = .79, n = 98), Filipino (M = .73, SD = .70, n = 44), and Japanese participants (M = .66, SD = .71, n = 67).

An ANOVA was run on the *submissiveness and lacking communications skills* sub-scale by six of the largest ethnicities within this study. Results indicated there was a significant difference in the frequency of microaggressions experience among different ethnicities, $F(5,336) = 4.32$, $p < .05$, $\eta^2 = .06$. Post-hoc tests revealed that Indian ($M = 1.20$, $SD = .83$, n = 29) and Vietnamese participants ($M = 1.05$, $SD = .98$, n = 40) perceived significantly higher frequency of *submissiveness and lacking communication skills* microaggressions than Chinese ($M = .69$, $SD = .85$, n = 98), Korean ($M = .67$, $SD = .83$, n = 64), Filipino ($M = .61$, $SD = .76$, n = 44), and Japanese participants ($M = .50$, $SD = .76$, n = 67).

An ANOVA was run on the *ascription of math competency* sub-scale by six of the largest ethnicities within this study. Results indicated there was a significant difference in the frequency of microaggressions experience among different ethnicities, $F(5,336) = 6.53$, $p < .05$, $\eta^2 = .09$. Post-hoc tests revealed that Indian ($M = 1.54$, $SD = 1.12$, n = 29) and Vietnamese ($M = 1.31$, $SD = 1.25$, n = 40) participants perceived experiencing significantly higher frequency of *ascription of math competency* microaggressions than Korean ($M = .88$, $SD = .98$, n = 64), Chinese ($M = .75$, $SD = .91$, n = 98), Filipino ($M = .73$, $SD = .95$, n = 44), and Japanese participants ($M = .52$, $SD = .81$, n = 67).

An ANOVA was run on the *mistaken identity* sub-scale by six of the largest ethnicities within this study. Results indicated there was a significant difference in the frequency of microaggressions experience among different ethnicities, $F(5,336) = 6.02$, $p < .05$, $\eta^2 = .08$. Post-hoc tests revealed that Vietnamese ($M = 1.75$, $SD = 1.15$, n = 40) and Indian ($M = 1.65$, $SD = .92$, n = 29) participants perceived significantly higher frequency of *mistaken identity* microaggressions than Korean ($M = 1.28$, $SD = .96$, n = 64), Chinese ($M = 1.03$, $SD = .92$, n = 98), Filipino ($M = .99$, $SD = .91$, n = 44), and Japanese participants ($M = .92$, $SD = .98$, n = 67).

An ANOVA was run on the *not recognized* sub-scale by six of the largest ethnicities within this study. Results indicated there was a significant difference in the frequency of microaggressions experience among different ethnicities, $F(5,336) = 1.52$, $p > .05$, ns. Results indicated that these six different ethnic groups reported perceive similar levels of *not recognized* in the workplace, Indian ($M = 1.33$, $SD = .74$, n = 29) and Vietnamese ($M = 1.04$, $SD = .92$, n = 40) Korean ($M = 1.01$, $SD = 1.01$, n = 64), Chinese ($M = .96$, $SD = 1.04$, n = 98), Japanese ($M = .85$, $SD = .90$, n = 67) and Filipino ($M = .77$, $SD = .81$, n = 44). These supplementary analyses suggest that gender, age, and work experience played a role in influencing various measures. Similarly, the different types of recruitment strategy also influenced perceptions of the WRMS-AAA. Therefore, it was justified that participants were randomly assigned to one of two groups for the EFA and CFA in order to minimize the impact of individual differences on specific outcomes.